



DOCUMENTS DEPT.

H12



BOOK NO.

ACCESSION

*375 Sa57: 2¹

286227

NOT TO BE TAKEN FROM THE LIBRARY

Form No. 37-5M

SAN FRANCISCO PUBLIC LIBRARY



3 1223 03565 0002

This volume contains **a**
items. Each one is
inventoried and
cataloged separately.

*San Francisco Public Schools
City and County of San Francisco*



*Course of Study
for
Atypical Classes*



By
NELLIE V. EAGER
Assistant Director of Atypical Classes

CONTENTS

Course of study for atypical classes.

Course of study in health education.

*San Francisco Public Schools
City and County of San Francisco*



*Course of Study
for
Atypical Classes*



*By
NELLIE V. EAGER
Assistant Director of Atypical Classes*

*San Francisco Public Schools
City and County of San Francisco*

vv

***COURSE OF STUDY
for
Atypical Classes***

*375 *August, 1926*

Sa 57:2 $\frac{1}{2}$
286227 vv

Board of Education

ALFRED I. ESBERG, President

FRED DOHRMANN, JR.
IRA W. COBURN
MRS. ERNEST J. MOTT

DANIEL C. MURPHY
ALICE ROSE POWER
MRS. MARY PRAG

vv

Superintendent of Schools
JOSEPH M. GWINN

vv

Deputy Superintendents of Schools
A. J. CLOUD, Chief Deputy

WILLIAM H. DeBELL BERTHA E. ROBERTS
DR. A. A. D'ANCONA M. M. FITZGERALD
DAVID P. HARDY WALTER NOLAN

FOREWORD



This Course of Study for the Atypical Classes has been adopted by the Board of Education for use during the school session 1926-1927. As the theories in the education of defectives are being constantly tested, this Course will be revised as the needs appear before final adoption for further use.

Although an Atypical Class Teacher must be trained in such a way that will allow her to bear the greatest responsibility in subject matter, still the teachers of Atypical Classes, throughout the country, are asking for a definite outline of activities and subjects, which have been accomplished in the teaching of Atypical Children. The content of this Course has been successfully used in the Atypical Classes of the San Francisco Public School Department.

This Course of Study has been prepared by Miss Nellie V. Eager—Assistant Director of the Atypical Classes of the San Francisco School Department. We are deeply indebted to Miss Eager for this service.

J. M. GWINN,

September, 1926.

Superintendent of Schools.

TABLE OF CONTENTS



	Page
1. General Plan.....	7-10
2. Arithmetic.....	10-15
3. Reading.....	15-22
4. Language.....	22-29
5. Spelling.....	22-38
6. Handwriting.....	38-39
7. History.....	40
8. Geography.....	41-43
9. Nature Study.....	44-45
10. Civics.....	45-47
11. Physical Education.....	47-49
12. Sense Training.....	49-52
13. Health Education.....	52-53
14. Industrial Work.....	53-60
15. Art.....	60-64
16. Music.....	64-65
17. Corrective Speech.....	65
18. Suggestive Program.....	65-66
19. General Bibliography.....	67-68
20. Our Slogan.....	68

"A COURSE OF STUDY FOR ATYPICAL CHILDREN"

In the use of this Course of Study, the San Francisco Public School Course of Study should be carefully studied by all teachers of Atypical Classes and used as a background.

We have found that the atypical child is not only happier but strongly desires that he be given as much academic work as he is capable of taking. There must be continuity in all subjects. With atypical children, it is the steady, day by day, varied lessons that fix the fundamentals in the mind of the child.

Aims of the Atypical Class

1. To discover the possibilities of the individual pupil and develop these possibilities to the limit of his capacity.
2. To help the pupil to make adjustment.
3. To train pupil morally, socially, industrially and academically so that pupil may know better how to live, that he may take his place in society upon leaving Atypical Class and be less of an economic burden than he would have been without the training of an Atypical Class.

Program for Dealing with Atypical Class Children

1. Selection	4. Supervision
2. Registration	5. Segregation
3. Education	

SELECTION

Problem children are reported by school authorities, social workers and parents to the Director of Atypical Classes. The selection is based upon the results of intelligence tests, supplemented by performance tests, investigation of physical condition, family, life and school history of child. Under no condition is a child enrolled in an atypical class unless his re-actions are definitely subnormal and his tests show a mental retardation of at least three years, with an intelligent quotient less than 75%. Psychopathic cases, epileptics and other phases of mental disorders are exceptions to this rule, as in many cases they have higher intelligence quotients but their reactions are such as to warrant their segregation from regular grades.

The Director of Atypical Classes recommends to the Superintendent or to principal, who in turn sends recommendation to Superintendent, that a certain child be enrolled in an Atypical Class. The Superintendent sends his directions that child be sent to the Atypical Class specified. The pupils of every Atypical Class are thus enrolled only on direction of the Superintendent.

REGISTRATION

Our records give excellent data of each child's mental, family, life and school history.

A folder for each child contains the mental, educational tests, family, life and school history of child. Index cards with name of child, parent, birth, address, former and present school, date of entrance to atypical class, mental age and intelligence quotient at

date of entrance to class, name of examiner and person, who referred case to Director of Atypical Classes.

Attached to back of above cards are records, for each year during child's attendance in Atypical Class, of academic work in arithmetic, reading, spelling, language, writing, manual work, domestic science, handicraft and behavior.

EDUCATION

Teachers

The Atypical Class Teacher must be trained in a way that will allow her to bear the greatest responsibility in the question of subject matter. Specific types are constantly appearing in our classes, so it is our belief that the teacher of defectives must be an educator, psychologist, and social worker in one. She should have successful experience in regular grade work and in addition have special training in the work with subnormals. It is of importance that she be familiar with methods and subject matter of regular grades, so that she can deal more efficiently with her higher group.

Children

Pupils are grouped whenever possible. We usually find four groups in classes outside the centers. Kindergarten—Low Primary (First and Second grades)—High Primary (Third and Fourth Grades)—Low Elementary (Fifth and in some cases Sixth Grades).

In assigning these groups into corresponding grades, we must think in terms which are broad and flexible enough to include all groups and variations. Practically all atypical class children fit into these groups. However, at times, we find pupils who are capable of doing a higher grade of academic work. In such cases, the teacher may follow as far as possible the San Francisco Public School Course of Study for regular grades. Whenever an individual, in an atypical class, shows special ability in any subject individual instruction to meet his needs must be given. In some cases pupils are allowed to enroll in regular grades in same school for given subject, in which they may show ability.

Chronological ages of Atypical Class Children range from six years to eighteen years.

Mental ages of these children range from three to ten years.

Psychopathic cases are an exception to this ruling. Intelligence may co-exist with an accentuated instability, irresistible impulses or pathological symptoms grave enough to warrant segregation in an Atypical Class. Mental age is not the only basis for grading the pupil. Manual ability, length of time in training and behavior are equally considered. Whenever a pupil is not fitting well in his particular class, the case is investigated and a re-adjustment made.

Pupils are placed in next higher group as fast as they show ability to do the work of that group. Progress of pupils is checked by mental and educational tests.

SUPERVISION

After-Care Department

Our Atypical Class Children are closely supervised, encouraged and helped by their Class Teacher, the Director of the Atypical

Classes and the After-Care Teacher. A friendly relation with the families of these pupils and an intimate knowledge of home conditions is established.

No community can afford the risk of throwing these children, who pass beyond the control of the school, upon their own resources. For no matter how well a subnormal may be trained, he can never be given that necessary power of self-direction which enables one to compete with the world. Therefore these children are in constant need of a friend. Someone to meet emergencies for them, straighten their difficulties and start them off anew. Because of the nature of a mental defect, permanent supervision is necessary. We have met this situation by providing an "After-Care" or "Follow-up" system for the pupils of Atypical Classes.

When the age is reached at which an Atypical Class Pupil can legally leave school, suitable employment is found for him. The teacher in charge of this work has had the experience of being a teacher of normal and subnormal children with additional special service training. She guides and advises the children and keeps track of any changes in employment. She becomes acquainted with the families of these boys and girls and knows their home conditions. The children and parents come to her with all their difficulties. She acts as a humanity worker and a real friend. The two types of defectives, with whom we deal, are the few imbeciles who are able to perform some simple task in the working world and the morons who constitute the larger and more important group. The morons are the most dangerous of subnormals because they are assumed to be normal and are treated and expected to act as such. It is chiefly from this group that our classes are composed. It is necessary for the "After-Care Teacher" to canvass employers of comparatively unskilled labor in order to secure employment for this group. Great care is taken to select reliable firms throughout the city where the working conditions are good and they are willing to treat our girls and boys in the same manner as other employees. There is a feeling of embarrassment connected with mental deviation so tact must be used in dealing with parents and employers.

When seeking employment for our girls and boys, the type who are quiet, law-abiding and industrious, we bear in mind what the army survey brought out—that a large number of defectives of this type were self-supporting and had never given any trouble because they were working under conditions simple enough to fall within their comprehension and the social demands were not too great. Whether or not the mental deviation is made known depends on the type of the mental defect. If it is an instability with outbursts of temper or if the individual is a social menace in any way, conditions are explained to employer. But when placing a stable type, we take into consideration the attitude of the employer and the grade of work. Because when we look about at the help in most places of unskilled labor, few are above the mental level of the one for whom we are seeking employment. The only difference in most cases, they escaped segregation and consequently are not as well trained as the Atypical Class Pupil.

We are proud of the low percentage of Atypical Class Pupils who

have had court difficulties. In spite of the most careful training and special safeguards, there is a group of defectives who are so unstable and erratic in conduct and who have such difficult personality make-ups that they can never adjust themselves and their re-actions are anti-social.

But as our reports show, backed by the surveys through the country, the Atypical Class has done much in training the hopeful defective to be law-abiding and self-supporting. There are a large number of "hopeful defectives." The late Dr. Walter E. Fernald of Massachusetts, an authority in the work with subnormals, stated in many of his reprints and lecturers that the decent feeble-minded far outnumber the trouble-makers, who are so much better known that they have given a bad name to the entire group. The nature of the work of social workers limits their contact to the failure and it is hard for them to see a hopeful defective. The average wage of our former pupils, whose chronological ages range from sixteen to thirty years and mentally range from eight to ten years, is \$16.64 per week for the boys and \$12.70 per week for the girls. The list of positions include employment in various unskilled labors with the exception of a very few cases, who have succeeded in higher types of employment such as a musician, fur designer, telephone operators and expert weavers.

The "After-Care Teacher" also keeps in constant touch with the large group of our former pupils, who are mentally unfit to compete with the working-world and who remain at home. If home conditions are such that the child cannot be properly cared for or if the child is a social menace, the "After-Care Teacher" whenever possible, recommends and seeks permanent segregation in an institution for child.

The institutions report regularly on the Atypical Children under their care and the ones who have been paroled.

SEGREGATION

We aim for permanent segregation for defective delinquents and the lower helpless group of feeble-minded.

ARITHMETIC

Aim

1. To give atypical child power of using the four fundamental processes in arithmetic.
2. To teach child to apply this knowledge to his daily activities in simple problems.
3. To teach as much arithmetic as child is capable of comprehending as arithmetic is so closely related to child's life interests.

Kindergarten

Count to ten.

Only concrete counting. Every possible activity worked into this concrete counting.

Count:

1. Materials found in class-room as erasers, chalk, books, pencils, boys, girls, pictures, windows, sticks, etc.

2. Cut a definite number of pieces of paper, squares, circles, etc.
3. String a definite number of large beads, buttons, etc.
4. Peg board.
5. Montessori Material.

BIBLIOGRAPHY

Harter School Supply Co., 601 Mission St., S. F.
 "The Primary School"—Annie E. Moore.

Low Primary

Continue counting of objects until number concept is fixed in mind of child.

Counting:

1. Count concrete objects.
2. String definite number of beads, straws, etc.
3. Group definite number of different articles together.
4. Use of peg board.
5. Use of counting frame.
6. Paper cutting as cutting a definite number of squares, circles, rings, lanterns, etc.
7. Tapping—Have children close eyes—count the number of taps given by teacher or a selected child.
8. Use of rubber ball. Have child bounce ball a given number of times. Teacher or a selected child bounce ball a definite number of times, call on a member of group to give answer.
9. Make monthly calendar, checker boards, etc.
10. Use of play store in application of making simple change. Frequent drills on making change is most necessary for atypical child. Introduce various games which give opportunity for child to work with coins and which will put into practice child's knowledge of counting, reading and writing of numbers.

After child is able to count by ones, fives, tens and commencing at any number to one hundred, he is ready for column addition.

Bulletins devised by the late Dr. Frederick Burk—San Francisco State Teachers' College—offer the best material available in teaching number work to the primary grades.

Reading and Writing of Numbers

The reading and writing of numbers is given in connection with counting.

1. Read and write numbers to one hundred.
2. Keep score for games.
3. Make price tags for play store.
4. Games involving the writing and erasing of numbers on black-board.
5. Teacher writes number on board and next to number writes name of a child in class. Child recognizes name, comes to front of room and bounces ball the number of times indicated on board. Class watches and tallies the response. This correlates with silent reading and motor control. This

device can be used with examples involving the four fundamentals.

6. Find different pages in books.
7. Assorting and naming coins—one, five, ten and twenty-five cents.
8. Study face of clock. Have model clocks. Show school time.
(Opening of school session, recess, noon, dismissal.)
9. Make individual rulers with inch measurements.
10. Matching numbers.
11. Teach date, birthday and vacations.
12. Teach number of days in week and months in year.

Measurements

Taught by use of concrete material:

1. Tall, short, above, below, far, near, big, little, high, low, right, left, etc.
2. Pint, quart. Bottles of various sizes, measure liquids.
3. Dozen—half-dozen.
4. Compare weights.

Addition

Use of concrete objects.

Single column.

Double columns of two placed figures. (Avoid carrying.)

Simple problems of combinations already learned.

Visual problems as how many boys, girls, or certain objects in room. Watching action. How many are writing, sitting, etc.

Subtraction

Use of concrete objects.

Simple problems.

Drill on distinct difference between signs expressing process.

(Children are apt to be very careless in the writing and recognizing of these signs.)

BIBLIOGRAPHY

Dr. Frederick Burk: Arithmetic Bulletins; San Francisco Teachers' State college, San Francisco, Calif.

McClymonds & Jones: Elementary Arithmetic Book 1.

San Francisco Public School Course of Study.

Waldo: First Journeys into Number Land.

Harris & Waldo: Number Games for Grades 1 and 2.

Harter School Supply Co., 601 Mission St., San Francisco.

High Primary Addition

1. Notation to 1,000.
2. Teach forty-five combinations to all pupils who are capable of mastering them.
3. Drill on column addition.
4. Teach carrying.
5. Simple problems involving combinations.

Subtraction

1. Use of concrete objects.
2. Simple problems.
3. Drill on the distinct difference between signs expressing process of addition and subtraction.
4. Teach borrowing. (Method should vary to fit individual child.)

We find that some atypical class children never reach the stage in number conception where they can add or subtract without the use of concrete material, written marks, etc. The habit should not be allowed to grow except with the hopeless cases.

With some cases, it is advisable to introduce multiplication before subtraction is taught.

Multiplication

Foundation of multiplication should be laid in addition and subtraction.

Introduce multiplication as concretely as it is possible.

A Number Board is Helpful at this Stage

This board can be easily made in the workshop. Take $\frac{1}{2}$ -inch board, leave 3-inch margin. In the middle of this margin groove a 2-inch square in which a card will fit, bearing the name of the table used ($2x$, etc.). At top of board write number horizontally and evenly spaced across board-numbers one to twelve inclusive. Directly under the number one and evenly spaced groove twelve holes in a vertical manner. Holes should not penetrate through board, they should be just deep enough to hold bean or button. Make the same number of holes under each number up to twelve inclusive. When completed board will have one hundred forty-four holes evenly spaced. Beans or buttons can be used to illustrate concretely the process of multiplication.

Peg board can be used in same way but children enjoy the number board far more than peg board.

Teach tables through fours. One number as multiplier.

Short Division

Multiplication and division are developed together as parallel lines of work. The corresponding facts of division are introduced as soon as the facts of multiplication have been mastered and used. Master each fact in even division before uneven division is attempted.

Note

Teacher must use method which will fit need of the individual child. Process must be presented slowly and carefully.

Calendars: Mark birthdays, holidays, full, new moon, etc. Make calendars. Teach Roman Numerals 1 to 12 inclusive. Write the numerals 3, 6, 9 and 12 in colored crayons or ink so as to fix the hour, half hour and quarter hour on clock. This will help in teaching time.

Have children draw or construct clocks indicating the hour, half hour, quarter hour. Proceed to such time as 9:20, 8:40, 10:50.

Utilize discarded clocks for this work.

Postage: One and two cent stamps.

Drill on making change.

Forms: Teach square, oblong, circle and triangle.

Measurements: Correlate with industrial work.

Teach inch, foot, yard, dozen, pint, quart, gallon, second, Minute, hour, day, month, year.

Teach $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ (Concretely).

Make ruler showing the above measurements.

Appreciation of distance: Measuring by ruler, foot, hand spacing to prove accuracy.

Terms: Farther, nearer, above, below, shorter, nearer, right, left.

Bring out importance of the rule keep to your right.

BIBLIOGRAPHY

McClymonds & Jones: Elementary Arithmetic—Books 1 and 2.

San Francisco Public School Course of Study.

Harter's School Supply Co., 601 Mission St., San Francisco.

Dr. Frederick Burk: Arithmetic Bulletins—San Francisco State College.

Lennes: Work, Drill and Test Sheets in Arithmetic—Laidlaw Bros.—Chicago.

Franklin S. Hoyt and Harriet E. Peet: First Year in Number—Houghton Mifflin Co., Publishers.

Low Elementary

Addition

Subtraction

Multiplication

Short Division

Teach Long Division

Notation through tens of thousands.

Socialize arithmetic lessons as far as it is possible.

Drill on making change involving practical everyday problems.

Make use of school room accounts as milk, bank money, proceeds from toy sale, etc.

Bills: Have regular forms and allow child to fill in and compute.

Bank books and simple interest.

Correlate with industrial work. Review fractions taught in High Primary and add $\frac{1}{3}$ and $\frac{1}{8}$. Make rulers showing the divisions of measurement.

Compute cost of clothing for a year, luxuries as the yearly cost of one movie per week, ten cents for candy per week, etc.

Cost of transportation within city, state, outside state and to foreign places.

Auto rates, car-fares-local and adjoining cities. Commutation tickets, ferry rates.

Fractions and Decimals. Atypical Class children who have mastered the four fundamentals and are capable of doing more advanced work in arithmetic should have work presented in same manner as with normal children as outlined in the San Francisco Public School Course of Study. Work must always be presented slowly and with all necessary help.

ARITHMETIC GAMES

Teacher should be ever on the watch for new games and devices for all academic work.

Suggestive Games

1. Ball games: Bouncing, throwing against wall or to one another and counting number of taps.
Answers to examples in addition, subtraction or division given by number of taps of ball.
Bouncing and counting by twos, threes, etc.
Keeping score in various ball games and relay races.
2. Ten Pins.
3. Throwing rings on hooks below which numbers are pasted.
Score according to rings on hooks.
4. Kicking erasers into numbered spaces (3 or 4 divisions): Draw oblong figure (about four by two feet) on floor with numbered divisions. At a distance of four feet from figure, place erasers in a row one behind other with a space of about two feet between each eraser. Child kicks eraser into numbered spaces. Two or more kicks allowed for each eraser. While doing this, child is on one foot so it also serves as game for balance. Score is kept for this game.
5. Top and marble games.
6. Flinch Game.
7. Checkers.
8. Lotto.
9. Dominoes.
10. Clock Game given in Thorndike.

BIBLIOGRAPHY

San Francisco Public School Course of Study.

McClymonds & Jones: Elementary Arithmetic—Books one and two.

Arithmetic Bulletins: San Francisco State Teachers' College.
Harter's School Supply Co., 601 Mission St., San Francisco.

READING

Aims

To teach child, as far as he is capable of achieving, the mastery of the technic of reading, developing in him an ability for intelligent interpretation and pleasure in his reading and the use of the dictionary if it is within his mental capacity.

Means of Obtaining this Goal

ORAL READING

Oral reading with our atypical children is most important because the greatest amount of information gained in reading will be that which is received through oral reading. It must be remembered that among many of our atypical children, the power to talk was abnormally delayed and the vocabulary of many of these children is very limited. Therefore through oral reading pronunciation, word and phrase recognition becomes fixed.

The teacher should constantly read suitable material to children, because listening to and imitating the spoken word and sentence is excellent training.

Reading books should be devised by teacher to correlate with school and home activities. Nature study, civics, good manners and character building furnish valuable material for such books. Allow children to make their own books and choose illustrations.

Reproduction and dramatization of stories are most helpful.

Sense games which develop the eye and voice span should be given as such training will lay foundation for quick recognition of sentence, word or phrase elements.

Memorizing nursery rhymes, short poems, songs, slogans and proverbs is helpful.

Have children read songs from music books. Also simple problems in arithmetic.

Names of members of class written on cards should be given to each child. He should learn to read these, arrange them alphabetically and according to seating plan. Other devices with names of teachers, schools, cities, noted persons, etc. can be used in like manner. Spelling can be correlated with this.

Teach names of streets, cars, traffic signals, signs, popular advertisements, parks, public buildings, suburbs, large cities, etc.

Bulletin boards are valuable. News and pictures of current events which will interest the child should be posted. If possible construct a board upon which card-board or porcelain letters can be set up. Child can arrange these to make special announcements.

There are older children, who are not able to read beyond a primer or readers designated for the early grades. On account of their chronological ages, these children would feel the stigma of their inability to read if given one of these readers, so reading books prepared by teacher or readers not marked according to grades will serve their purpose.

To prepare children for a knowledge of the use of the dictionary, many games and devices for matching and assorting words beginning with same letter should be devised. The alphabet should be learned through rote and song.

SILENT READING

The ability to read silently measures the degree of the child's comprehension. The development of silent reading should be slowly and carefully planned. At first only very short stories or sentences should be given.

The teacher guides the child in developing an ability for silent reading so that the central ideas of the lessons may be interpreted by means of questions (printed or oral) and various games as picture-reading, interpreting pictures, matching words and stories to pictures, reproducing and dramatizing stories and by supplementary reading.

It has been found that an atypical child can use the material for silent reading of the grade below that of his oral reading. In selecting reading material from libraries that which comes within his compreh-

hension is found to be at least two grades below that of his oral reading.

PHONICS

It has been our experience that many atypical children are phonetically deaf and are not capable of grasping phonics.

With the group who are capable of being taught phonics, the teacher may follow methods suggested in the San Francisco Public School Course of Study. However, phonics should not be introduced until child is capable of recognizing words, phrases, easy sentences and short stories.

WORD-APHASIA

In teaching atypical children who are cases bordering on word-aphasia, much patience and time is required. The following points should be remembered:

1. Much sense training is necessary.
2. Develop reading lessons very slowly with frequent repetition of the same words and phrases.
3. Material used should center around child's activities.
4. Child should be allowed to follow in every reading lesson whether or not he can recognize any of the words.
5. Teacher or pupil, who is a good reader, should frequently read stories to these children.
6. Child should be encouraged to dramatize and reproduce stories.
7. If child is capable of learning to recognize any words, select words with which he comes in contact in his daily life.

KINDERGARTEN

The majority of this group are just beginning to learn to talk and therefore very little reading is attempted beyond teaching them to recognize their own names and perhaps the names of their classmates.

Socialized conversation.

LOW PRIMARY

Suggestion for preparing a Preliminary Book for beginner in reading

(Aim to have the phrases and sentences involve motor control. Have child read the phrase or sentence and actually perform the act.)

Suggestive sentences:

1. Make a boat.
(Teacher illustrate. Later children draw and color.)
2. Make it red.
3. Make a kite.
(Teacher illustrate. Later children draw and color.)
4. Make it red.
5. Make a hat.
6. Make it yellow.
7. Make a fan.
8. Make it yellow.

(Children may perform the acts suggested in above sentences on blackboard or paper.)

9. Find a dog.
(Separate pictures of dog and cat.)
10. Find a bird.
11. Find a cat.
(Separate pictures of dog and cat.)
12. Find a book.
(Pictures of action accompany these sentences.)
13. Run.
14. Jump.
15. Sing.
16. I can run.
17. I can jump.
18. I can sing.
19. I can hop.
20. Make one big house.
21. Make one little house.
22. Make one big tree.
23. Make one little tree.
24. One little bird can sing.
25. One little bird can hop.
26. One little bird can fly.
27. One big bird can sing.
28. One big bird can hop.
29. One big bird can fly.
30. My dog can run.
31. My cat can run.
32. I can run.
33. My dog said, "Bow-wow."
34. My cat said, "Meow-meow."

At end of book, write the following words accompanied by pictures to illustrate word. This serves as a dictionary. Write four words on each page.

1. red	3. boat	5. hat
2. yellow	4. kite	6. fan
7. house	9. dog	11. bird
8. tree	10. cat	12. book

These books can be made very attractive and may be labeled, "My First Book."

The sentences numbered 1 to 23 inclusive may be arranged in sets of two on each page.

The sentences 24 to 32 inclusive may be arranged in sets of three on each page.

Sentences 33 and 34—one on a page.

These lessons have been used most successful with beginners in the Frederick Burk School—San Francisco State Teachers' College.

Preliminary lessons to prepare child to begin to read his first printed book.

1. Build up a vocabulary of about twenty words, which occur in the reader in which child is to start his reading.

2. Present two at a time. Write words on a card on which a picture is pasted which represents the idea of the word, so that child gets an association of word and picture.
3. The words presented are written on smaller cards, without pictures, in groups of six cards with same word.
4. Child matches these with larger picture cards.
5. Puzzles: Words on cut-up cards which when correctly placed will form objects as a valentine, boxes, kites, houses, etc.
6. When about twenty are mastered, child is given a set of cards on which words are written unaccompanied by pictures.
7. Teacher prepares book containing phrases and sentences composed of words which child has learnt.
8. Child is now ready to start primer or book associated with the above lessons.
9. Teacher should make use of blackboard and various word games throughout these lessons.

“My Book”, John C. Winston Co., Publishers, contains a book of favorite primer stories and also material for preliminary lessons—Price 10c.

Additional material can be obtained from Weber & Co. and Milton Bradley.—San Francisco.

10. Label articles in room. Match these with duplicates.
11. Write words on blackboard or paper and have child draw picture opposite word.
12. Cards: Words on one side—picture on other side.
13. Flash cards giving various directions as, “Shut the door.” “Clean the erasers,” “Sit down,” etc.
14. Announcement flash cards as “Bread and Milk today,” “Fig-bars and Milk tomorrow,” “Rainy Day Session” (Picture suggesting rain on poster), “We are going to have new books today,” “Today is Monday,” etc.
15. Frequent reading aloud to pupils by teacher—stories and rhymes.
16. Games, devices and puzzles.
17. Reproduction and Dramatization.

BIBLIOGRAPHY

“My Book”—John C. Winston Co., 149 New Montgomery Street, San Francisco.

Flash Cards—Devised by teacher or purchased through Publishing Companies.

“Easy Reader”: Druzilla R. Mackey—F. A. Owen Publishing Co., Dansville, New York.

“The First Term Primer”: Emma Maguire—F. A. Owen Publishing Co., Dansville, New York.

“The Fun Book”: Mabel G. La Rue—Macmillan Publishing Co.

“Under the Story Tree”: Mabel G. La Rue—Macmillan Publishing Company.

“The Animal Land”: Mabel G. La Rue—Macmillan Publishing Company.

"Everyday Classic First Readers": Baker-Thorndike-Dunn—Macmillan Publishing Co.

Modern School Readers—Primer: Thompson & Wilson—Harr Wagner Publishing Co.

Modern School Readers—Book one and two: Thompson & Wilson—Harr Wagner Publishing Co.

The Winston Readers: Firman & Maltby—John C. Winston Co., 149 New Montgomery Street.

The Winston Companion Readers: Firman & Maltby—John C. Winston Co., 149 New Montgomery Street.
(For First and Second Grade)

The Silent Readers: Lewis & Rowland—John C. Winston Co., 149 New Montgomery Street.
(For First and Second Grade)

Jingles—A Reader for Beginners: Adapted by Alice Rose Power—Harr Wagner Co.

Tablet Pictures: The Harter School Supply Co.—C. F. Weber & Co., 601 Mission Street, San Francisco.

Elliptical Stories: The Harter School Supply Co.—C. F. Weber & Co., 601 Mission Street, San Francisco.

The Silent Teacher in Vocabulary Building: The Harter School Supply Co.—C. F. Weber & Co., 601 Mission Street, San Francisco.

Bradley's Silent Reading Seat Work—Milton Bradley Publishing Co.

Nursery Rhymes from Many Lands—Charles Scribner Co., Publishers. Reproduction and Dramatization:

Chadwick-Freeman: Chain Stories and Playlets—World Book Co. Publishers.

Injun Babies—Stories and Drawings by Maynard Dixon.

HIGH PRIMARY

1. Reading of various books suggested in bibliography.
2. Reading of catalogues—Sears, Roebuck & Co. will send one free of charge.
3. Riddles.
4. Jokes—Funny Sheets.
5. Newspaper.
6. Advertisements in magazines and newspapers.
7. Reading of songs, poems, rhymes, slogans and proverbs.
8. Reading of signals and signs.
9. Drill on alphabet: Make words beginning with each letter. Drill on what letter comes before and after a given letter. This will prepare way for use of dictionary and telephone directory.
10. Write a paragraph on board. Allow it to remain on board for a week. Drill on reading it. Write words, phrases or sentences occurring in paragraph on cards. Have children arrange cards so as to form the paragraph which is written on board.
11. Teacher will find further suggestions offered in Silent Readers, Language, Civics, Nature Study, History and Geography Books.

12. Reading of arithmetic problems.
13. Reproduction and Dramatization.

BIBLIOGRAPHY

Modern School Readers—Book 3 and 4: Thompson & Wilson—Harr Wagner Publishing Co.
Bolenius Readers—Houghton-Mifflin Co., Publishers.
The Winston Readers: Firman & Maltby—The John C. Winston Co., Publishers, 149 New Montgomery Street.
The Winston Companion Readers: Firman & Maltby—The John C. Winston Co., Publishers, 149 New Montgomery Street.
The Silent Readers—Third and Fourth Grades: Lewis & Rowland—John C. Winston Co., Publishers, 149 New Montgomery Street.
A Book of Fables and Folk Stories: H. E. Scudder—Houghton-Mifflin Co.
Short Stories and Anecdotes: L. P. Goodhue—Ideal School Supply Co., Chicago.
Reading to Find Out: Frances Ross—Macmillan Co.
Old Stories for Young Readers: Laura A. Large—Macmillan Co.
Five Little Friends: Adams—Macmillan Co.
Little Ugly Face: Florence C. Coolidge—Macmillan Co.
Goldtree and Silvertree: Katherine Morse—Macmillan Co.

LOW ELEMENTARY

1. Stress on Silent Reading.
2. Reading of books suggested in bibliography.
3. Reading of books on social studies.
4. Reading of catalogues, newspapers, magazines, poems, etc.
5. Reading of bills—water, gas, taxes, telephone, etc.
6. Reading of postal orders.
7. Movie announcements in newspapers. Local movie will mail program free of charge.
8. Bulletin Board: Current events, School activities, Weather reports, Sports and Special announcements.
A sheet called “. School Newspaper.” (Name of your school inserted.)
Items of interest in neighborhood posted.
9. Library table: Teacher should make use of local library.
10. Reproduction and Dramatization.

BIBLIOGRAPHY

New American Reader—Houghton Mifflin Co., Publishers.
Bolenius Reader—Houghton-Mifflin Co., Publishers.
Silent Readers: Lewis & Rowland—John C. Winston Co., Publishers.
The Winston Clear-type Popular Classics:

1. Pinocchio
2. Robin Hood.
3. Treasure Island.
4. Robinson Crusoe.

5. The Arabian Nights.
6. Grimm's Fairy Tales.
7. Anderson's Fairy Tales.
8. Hans Brinker.
9. Indian Legends: Margaret Bemister—Macmillan Co.
10. Stories Grandmother Told: Kate F. Osswell—Macmillan Co.

LANGUAGE

Language, our means of expression, is a most important subject. Great stress should be laid on language, particularly oral language because self-expression is a distinct difficulty with many of our atypical children.

AIMS

Oral Language

1. To teach child to talk in sentences rather than in isolated words.
2. To train child to enunciate as clearly as it is possible for individual child.
3. To acquire a freedom of expression.
4. To train child to be a good listener as well as a good talker. (Interrupting and tale-bearing should be inhibited.)
5. To increase vocabulary.

Written Language

1. To enable child to express his thoughts in writing as clearly as is possible.
2. To enable him to write a letter. (Business and social.)
3. Ability to use correctly certain grammatical terms. (Orally and in written form.)

As an atypical child possesses only a limited amount of experiences and imagination, the training in language must be brief and concise, the facts must be drilled upon until they become habitual and their limited experiences must be utilized.

Kindergarten

Oral language is the most important work of this group, who are mentally of kindergarten age and with whom self-expression, in the majority of cases is a distinct difficulty.

When the child is capable of doing more, he is promoted to the next class where more academic work is given.

Methods: (Very simple as child is just beginning to learn to talk).

1. Informal conversation.
(Relating to personal experiences, excursions, pets, etc. Encourage child to talk. Whenever possible allow subject to be introduced by child.)
2. Polite expressions.
3. Nursery rhymes.
4. Description of pictures.

Written Language

None in this group.

Low Primary

Oral

1. Informal talks.
(Relating to personal experiences, pets, excursions, etc.)
2. Polite expressions.
(Through games, delivering messages within school building, use of toy telephone, etc.)
3. Description of pictures. Accustom children to stand in front of room and talk directly to class.
3. Names of the days of the week.
4. Nature story talks.
5. Nursery rhymes.
6. Salutation to the flag.
7. Learning to eliminate too many "ands" from conversation.
8. Drill on common errors in pronunciation:

Can versus kin
Brought versus brang
Saw versus sawn
Just versus jest

Practice pronouncing words which end in "ing" so as to give final letter its distinct sound.

Written Language: (Low Primary)

1. Copy simple sentences.
2. Blackboard work entirely with lower division. Paper and blackboard writing with higher division of low primary.
3. Make use of pictures in this sentence writing.
Suggestion: Place picture on board or manila paper, write a simple sentence referring to picture directly under it. Have child copy it several times. This will help later in presenting the sentence in the next higher group.
4. Dictation of the simple sentences already studied.

HIGH PRIMARY

Oral Language

1. Continue informal conversation. Current events, general topics which are of interest to child, etc. Encourage topics to be introduced by child.
2. Short poems, mottoes, slogans and songs.
3. Polite expressions through games and as occasions arise throughout the day.
4. Names of the months of the year and the seasons.
5. Holidays and their significance.
6. Telling riddles.
7. Telephone Games: Bring out use of telephone directory, correct manner in getting a number, answering and conversation.
8. Description, reproduction and dramatization.
9. Children are delighted with a puppet show. Music, industrial work, motor control and language can be correlated in a puppet show.

Music: Rhythm work through victrola and leader—Children orchestra.

Industrial Work: Construction of stage, curtains, other decorations of stage and the toy making.

Language: Prologue in which as many different children as possible are allowed to take part. Each may describe a particular part of the show, i. e.:

1. How idea of show originated.
2. By whom and how different parts were made.
3. Introducing members of orchestra and stage hands to audience.
4. Announcing and describing each act.

Motor Control: Making and manipulation of toys as they appear in show.

10. Teach child through games and much drill to use, as an unconscious habit, the correct form and pronunciation of troublesome words and phrases. Review list in low primary and add:

Drowned	versus drownded
Doesn't	versus does not
Teach	versus learn
Is	versus will be
John and I	versus John and me
It is I	versus It is me
February	versus Febuary
Library	versus Libary

Drill on pronunciation of words ending in "ing" so as to make final letter distinct: Also on words ending in "d," "t," "en," etc.

11. Try to eliminate "ain't" from child's vocabulary. Games and good-natured checking will help. Write the word "ain't" on a card and throw it in the waste basket. Tell children to try to keep it there all day. At end of day ask if it is out of basket. If so who allowed it to get out. Toys made in shop may be used instead of waste basket. "Ain't" may be given to toy policeman, lion, etc.
12. Drill on words in sentences which can take the place of "ain't" as am not, aren't, haven't, hasn't.
13. Teach number of days in the months of year. Memorize the old rhyme poem:

Thirty days hath September, April, June and November;
All the rest have thirty-one,
Except the second month alone
Which has but twenty-eight in fine
Until leap year comes and gives it twenty-nine.
This or any other version which you may know.

Written Language

1. Simple sentences.

The following suggestion for teaching sentences used in the individual teaching methods of the San Francisco State Teachers' College has proved most helpful.

THE SENTENCE

Each of the lines below tell you something. Each line is a sentence. Read the first sentence. Read the second sentence. Read the third sentence.

My dog can play.

He can run fast.

He can jump.

(Give more type sentences if necessary.)

Here are some more lines. Only one line really tells something. Only one line is a sentence. The other two are not.

Jack can

Jack can play ball.

can play ball

Jack can play ball is the only line that is a sentence.

Read the groups of lines below. Only one line in each group tells something. Find the line in each group which tells something.

my book

this is

This is my book.

a big car

My father has a big car.

my father has

I have a little sister.

a little sister

I have

like to hear

I like to hear.

hear the band

Horses can run fast.

horses fast

can run

like the rain

Little seeds like

Little seeds like the rain.

Cows eat grass

eat green grass

the pretty cows

go to show

I like to go to a show.

a good show

Drill on similar lessons until child gets the idea of a sentence.

Teacher copies about ten sentences from the above lessons. Calls children's attention that each sentence begins with a capital letter and ends with a period.

Find the lines that are sentences in this exercise. As children give them correctly teacher copies them on board. Allow children to copy sentences, telling them not to forget the capital letter and period for each sentence:

children playing
boys and girls
The children are playing.

Fred has a pony.
a little pony and a cart
pony in the street

the hen and the chicks
The hen calls the chicks.
yellow chicks

some red and white candy
I like candy.
sweet candy

Continue similar lessons until child recognizes sentence in group of lines and can copy it correctly.

Have children write short sentences about relatives, home, pets, playthings, etc.

THE QUESTION SENTENCE

So far the sentences have told you something. Some sentences ask questions. Question sentences begin with a capital letter just as the other sentences do but they do not end with periods. A question sentence ends with a question mark.

Notice the following sentences. They are all question sentences. Each sentence asks something. Each sentence ends with a question mark.

Have you a dog?
Can he jump?
Is he a big dog?

Practice making question marks.

Have children copy the above sentences. Remind them that every sentence begins with a capital letter and that each of these sentences must end with a question mark because each sentence asks a question.

After much drill on similar question sentences, have children write numerous questions about familiar objects, weather, vacation, sport, name, age, address, etc.

Teacher may write a list of questions on blackboard. Child copy question and write answer.

Devices and games given in bibliography will prove helpful.

After child has learned to write a sentence, to begin it with a capital letter and end it with a period or a question mark, the next step is to develop a **paragraph**.

Drill on writing paragraphs will bring out the use of more capital letters.

Paragraphs copied, studied and later dictated.

Writing of short stories.

Short social letters, postcards, notes (excuses for absences) and greetings for birthdays and various holidays. Postage regulations can be taught in connection with above letters and postcards.

Drill on writing of titles and the abbreviation of the titles of honor as: Mr., Mrs., Miss., Dr., etc. Bring these into use in writing of paragraphs, short stories and letters.

Drill on processes already taught through blank filling.

Teach the abbreviations of the days of week and months of the year.

Lessons given in Silent Reading will correlate with language lessons.

The children delight in finding personal letters or notes at the opening of a session or upon returning to the class-room after a recess. These letters or notes can be written on blackboard or paper enclosed in envelopes. Teacher can utilize information relating to the children's personal experiences, pets, etc.

Sentence Puzzles

Some children like to work puzzles.

These words can be made into a sentence. Ask children if they can arrange words so that they tell something:

broken doll my is

If there isn't any response, teacher gives answer and writes on board:

My doll is broken.

Drill on short sentences until child gets the idea. Then write a group of sentences on board and tell child that each can be made into a sentence. Allow children to arrange sentences, i. e.:

with me Rover plays

the ball throw I

he after runs it

always he ball catches

sister Mary my is

school go to she to likes

is little

big am I

eat seeds birds

on apple trees grows

boys ball play

play children to like

Devise other sentences.

TWO RULES

1. Every sentence begins with a capital letter.
2. Every sentence must end with a period or a question mark.

LOW ELEMENTARY

Oral

1. Continue informal conversation, current events, news bulletin, and general topics of interest to pupils.
2. Short poems and slogans.
3. Polite expressions, answering telephone, delivering messages in and out of school building. In some of our classes, the principal of the school appoints one of the pupils of atypical class to act as office boy or girl from two-thirty until three p. m.
4. Read to class at least one good classic story during semester.
- Choose one which will interest your particular group of children.

Suggestive Stories:

1. Robinson Crusoe—Daniel Defoe.
2. Jungle Book—Rudyard Kipling.
3. Uncle Remus—Joel Chandler.
4. Treasure Island—Robert Louis Stevenson.
5. Tom Sawyer—Mark Twain.
6. Arabian Nights—Orton Lowe.
7. Books suggested in bibliographies of the various subjects.
5. Description of pictures, reproduction and dramatization.
6. Review drills on troublesome words, phrases, pronunciation and eliminating too many “ands” and “ain’t” in conversation.
7. Drill on the most common homonyms:
Their, there; two, to, too; buy, by; new, knew; no, know; here, hear; red, read; write, right; threw, through.
8. Drill on verb tenses as:
Saw, seen; did, done; ate, eaten; went, gone; rang, rung; threw, thrown, etc.
Suggestion: Strong and weak words. **Saw** is a strong word. It can stand alone but **seen** is a weak word. It cannot stand alone. It needs the helper have or has. Use games and drills.
9. Drill on names and number of days in each month.

Written Language

1. Much drill in writing letters, postcards, greetings, notes and telegrams. Postage regulations.
2. Abbreviations of time, measurements, titles of honor, etc.
3. Drills on processes already taught through blank filling.
4. Lessons in Silent Reading will correlate with language lessons.
5. Write short stories.
6. Drill on facts taught in oral language.

Course of Study of the San Francisco Public Schools.
Standards in English: J. J. Mahoney—World Book Co.

Games and other Devices for Improving Pupils' English: W. W. Charter and Harry Paul—Bulletin 1923, No. 43, Bureau of Education, Washington, D. C.

McFadden English Series—Rand McNally Co.

Graded Language and Composition—Grades 1, 2, 3, and 4: James N. Hammond—F. A. Owens Publishing Co., Dansville, New York.

Language Games and Devices: Harter School Supply Co., 601 Mission Street.

Individual Method Drills and Bulletins—San Francisco Teachers' State College.

Games and Rhymes for Language—A. G. Deming.

Minimal Essentials in Elementary Language and Grammar: W. W. Charter—Macmillan Co.

Twentieth Year Book of the National Society for the Study of Education—Public School Publishing Co., Bloomington, Illinois.

The Language Garden: Howard, Hawthorne—Macmillan Co.

New Adeline Language Series: Newson & Co.—Macmillan Co.

Poems

Poems for Memorizing—Adapted by Alice R. Power.

Poems: Teachers ask for: Selected by Readers of Normal Instructor, Primary Plans—F. A. Owens Publishing Co., Dansville, New York.

For Memory Garden: Lucia May Wiant—F. A. Owen Publishing Co., Dansville, New York.

A Child's Own Book of Verse: Ada Skinner and Frances Wickes.

Silver Pennies: Blanch Thompson—Macmillan Co.

Poems found in Readers and Language Books.

Selected List of Poetry and Stories for Children in Kindergarten.

First and Second Grades. Compiled by Literature Committees of 1918-1920 International Kindergarten Union. Can be obtained through American Association of University Women, Washington, D. C.

SPELLING

Aim

To enable child to spell words which are in common use and will be used by child.

Methods

Teacher must adopt methods to fit individual child. Use devices and information derived from bibliography.

Low Primary

Teach spelling of child's name and other simple words which are within child's vocabulary and are in common use.

If the child's name is too difficult teach the spelling of the first name or merely initials until such time as child is able to get entire name.

2. Teach alphabet.

High Primary

1. Teach spelling of name and address.

2. State Text Spellers.

3. Make use of list of words accompanying this course of study.

4. Teach spelling of words which are in common use in connection with other subjects. Be sure that words chosen from lessons are ones which child will use and are in common use.

Low Elementary

1. State Text Spellers.
2. Complete list accompanying this course of study.
3. Words in common use selected from other subjects.
Again the teacher is warned only to select words which are of common use and ones which the child will use.
4. Use of dictionary and telephone book.

BIBLIOGRAPHY

San Francisco Course of Study for Public Schools and outlines suggesting methods sent to regular grades from Superintendent's Office.

Standard Tests.

Measuring Scale for Ability in Spelling: Leonard P. Ayres—Russel Sage Foundation, New York City.

Teaching Spelling by Plays and Games: S. A. Courtis—Detroit, Mich.

Spelling Books: Lippincott, Horn & Ashbaugh—J. B. Lippincott Co.

The Winston Simplified Dictionary—John Winston Co.

NOTE

The results of an experiment to utilize information obtained through the various mental tests given by our department may be of interest to the many friends of Leonard P. Ayres, who has contributed so largely to the teaching of spelling. In the word-association test in the tenth year of the Stanford Revision of the Binet-Simon Mental Test, the child is given three minutes to name as many words as he can within allotted time. In the case of most subnormals, these words are given slowly enough for examiner to record. One thousand tests of mentally retarded children in the San Francisco Public Schools were studied. Words and frequencies were noted. When the study was completed, we found that the correlation between our list and Ayres' list of the thousand most commonly used words, was ninety-eight per cent. Encouraged by this close correlation and the fact that our list bore such an intimate relation to our pupils, we decided to use the list in teaching spelling to our Atypical Class Children.

Teacher should bear in mind that this is an oral vocabulary and some of the words may be beyond the mental capacity of the child's written vocabulary. The words should be given according to their difficulty.

Words are grouped according to the mental ages of the children, who gave them.

The following letter was received from Dr. Leonard Ayres

THE
CLEVELAND
TRUST COMPANY

Leonard P. Ayres,
Vice-President.

Cleveland,
April 17 1926.

Miss N. V. Eager,
1027 Union Street,
San Francisco, Calif.

My Dear Miss Eager:

Your very interesting letter of March 29, has just been forwarded to me from the Russell Sage Foundation. More than five years ago I resigned from the Foundation, and at the same time left educational work. I have been dealing with financial problems ever since, and I am sorry to confess that my educational contacts are becoming progressively fewer as the time passes.

I think you have done a very interesting piece of work in putting together from the test records the vocabularies of the mentally slow children. It seems to me to constitute a real contribution on the subject. You ought to embody the results in an article and publish it in one of the educational periodicals. I am sending back your list in the thought that you may be able to use them in connection with such an article. Thanking you for letting me see them.

Sincerely yours,

LEONARD P. AYRES.

Mental Ages—		
7 years-8 years		
1. ant	42. door	86. Miss
2. apple	43. donkey	87. machin
3. Alice	44. did	88. man
4. ax	45. do	89. moon
5. any	46. does	90. mouse
6. baby	47. down	91. mattress
7. basket	48. eye	92. made
8. bee	49. eat	93. make
9. bell	50. Eddie	94. me
10. bench	51. Ethel	95. my
11. bicycle	52. flag	96. no
12. boy	53. fish	97. piano
13. boat	54. father	98. pencil
14. book	55. flowers	99. paper
15. box	56. fire-house	100. pan
16. board	57. face	101. pain
17. body	58. fall	102. pots
18. brother	59. far	103. potatoes
19. broom	60. feet	104. poor
20. but	61. fell	105. Ruth
21. band	62. girl	106. reindeer
22. be	63. go	107. sat
23. bear	64. grass	108. see
24. before	65. glad	109. ship
25. beg	66. game	110. sun
26. behind	67. horse	111. street
27. best	68. house	112. stockings
28. big	69. happy	113. shoes
29. chair	70. he	114. soon
30. can	71. head	115. stairs
31. cat	72. hear	116. San Francisco
32. church	73. Indian	117. table
33. chimney	74. I	118. trip
34. clothes	75. ink	119. tree
35. coat	76. iron	120. train
36. cold	77. it	121. wagon
37. curtain	78. John	122. watch
38. cost	79. Jack	123. windows
39. cut	80. Jim	124. wall
40. dog	81. June	125. water
41. doll	82. July	126. wash
	83. Jill	127. wood
	84. kettle	128. yes
	85. keep	

Mental Ages—		
8 years-9 years		
1. aeroplane	5. animal	12. ax
2. Alameda	6. apartment	13. ate
3. Anna	7. apple	14. across
4. and	8. August	15. add
	9. aunt	16. afraid
	10. automobile	17. age
	11. at	18. alone

19. always	61. city	103. elephant
20. anything	62. can	104. electric
21. after	63. come	105. egg
22. air	64. came	106. east
23. all	65. case	107. end
24. army	66. child	108. enough
25. assist	67. coming	109. even
26. awful	68. could	110. extra
27. any	69. crowd	111. evening
28. ball	70. copy	112. fish
29. bat	71. Christmas	113. father
30. basket	72. curtain	114. Friday
31. boy	73. coat	115. friend
32. box	74. clothes	116. faucet
33. bed	75. chair	117. fork
34. beans	76. carpet	118. floor
35. bird	77. candy	119. five
36. butter	78. chimney	120. fruit
37. building	79. calendar	121. flowers
38. bread	80. class	122. factory
39. book	81. clean	123. fair
40. brother	82. dog	124. family
41. brother-in-law	83. day	125. few
42. back	84. dear	126. find
43. became	85. desk	127. fence
44. begin	86. dishes	128. Fillmore
45. began	87. did	129. Fred
46. belong	88. duck	130. Fresno
47. bill	89. donkey	131. fine
48. black	90. dime	132. flag
49. blow	91. dollar	133. gave
50. born	92. dress	134. goat
51. build	93. do	135. grapes
52. built	94. dining-room	136. go
53. cross	95. door	137. Geary
54. cousin	96. dark	138. grass
55. cold	97. day	139. grandfather
56. cards	98. deep	140. grandmother
57. color	99. died	141. glove
58. cemetery	100. divide	142. glass
59. cow	101. dozen	143. gold
60. chalk	102. eraser	144. guess

**Mental Ages
8 years-9 years**

145. house	151. hammer	160. home
146. Hollywood	152. hatchet	161. how
147. here	153. hang	162. July
148. horse	154. head	163. Jackson
149. he	155. her	164. John
150. hat	156. handkerchief	165. Jack
	157. half	166. jail
	158. heart	167. Jim
	159. help	168. I

169. in	209. map	249. pair
170. is	210. mama	250. party
171. ink	211. nine	251. plant
172. iron	212. November	252. pound
173. knife	213. North Beach	253. push
174. kitchen	214. nice	254. reach
175. king	215. nickel	255. ready
176. kite	216. New York	256. red
177. kitten	217. now	257. ride
178. key	218. neat	258. ran
179. Kate	219. name	259. run
180. know	220. never	260. shoes
181. Los Angeles	221. newspaper	261. stockings
182. leak	222. nothing	262. string
183. lake	223. nice	263. ship
184. lion	224. night	264. sticks
185. like	225. number	265. star
186. lady	226. off	266. side
187. lily	227. out	267. sticks
188. letter	228. oil	268. spoon
189. let	229. orange	269. sweater
190. lot	230. ocean	270. Stockton
191. lamp	231. O'Farrell	271. sugar
192. light	232. Oakland	272. sand
193. little	233. overcoat	273. street
194. May	234. peaches	274. saucer
195. mother	235. pears	275. show
196. Monday	236. play	276. son
197. moon	237. paint	277. spell
198. monkey	238. pan	278. soap
199. mountain	239. paper	279. small
200. make	240. pain	280. soft
201. men	241. pot	281. sold
202. must	242. pen	282. some
203. Market	243. Pacific	283. something
204. money	244. pleasant	284. Tuesday
205. me	245. picture	285. telephone
206. Mary	246. peace	286. twenty
207. machine	247. page	287. tree
208. milk	248. paid	

Mental Ages 8 years-9 years

Mental Ages	296. they	307. tell
8 years-9 years	297. there	308. thank
	298. time	309. their
288. the	299. towel	310. time
289. to-day	300. table	311. tire
290. take	301. those	312. track
291. took	302. Thursday	313. town
292. through	303. Tuesday	314. trouble
293. top	304. this	315. thought
294. to-morrow	305. thing	316. town
295. teacher	306. teach	317. uncle

318. use	326. wood	334. wash
319. vanity	327. want	335. wrong
320. vacation	328. walk	336. win
321. very	329. went	337. waste
322. Wednesday	330. window	338. your
323. water	331. wheels	339. yesterday
324. wagon	332. wine	340. yard
325. William	333. was	341. you

Mental Ages—
9 years-10 years

1. Anna	41. boat	84. clock
2. Alfred	42. balloon	85. closet
3. and	43. bicycle	86. coffee
4. apple	44. brother	87. come
5. arithmetic	45. Billy	88. comb
6. as	46. bell	89. copper
7. aunt	47. bed	90. court
8. ax	48. board	91. clothes
9. Alice	49. by	92. cow
10. asked	50. bad	93. crazy
11. at	51. bottle	94. cup
12. afternoon	52. bread	95. curtain
13. ache	53. butter	96. class
14. about	54. beautiful	97. cork
15. automobile	55. beginning	98. cry
16. America	56. believe	99. chocolate
17. absent	57. between	100. carried
18. accident	58. bought	101. celebrate
19. address	59. bridge	102. change
20. against	60. brought	103. company
21. allow	61. business	104. country
22. almost	62. bat	105. chief
23. already	63. basket	106. close
24. among	64. band	107. clothing
25. answer	65. cake	108. candy
26. appear	66. California	109. chicken
27. appoint	67. cannery	110. crayon
28. argument	68. Charles	111. can
29. arrest	69. card	112. city
30. article	70. car	113. Clara
31. bank	71. coat	114. count
32. baby	72. carpet	115. dress
33. by	73. cat	116. dog
34. boy	74. cent	117. door
35. bring	75. cement	118. do
36. bay	76. chimney	119. daddy
37. book	77. chalk	120. draw
38. box	78. church	121. desk
39. ball	79. check	122. doll
40. blotter	80. chair	123. dance
	81. children	124. dollar
	82. clouds	125. doctor
	83. child	126. dish

127. dime	134. December	142. daughter
128. dutch	135. dot	143. dead
129. dwarf	136. dates	144. diamond
130. day	137. Dorothy	145. different
131. drummer	138. dipper	146. disappoint
132. drink	139. down	147. drown
133. drank	140. dear	148. eyes
	141. date	

**Mental Ages
9 years-10 years**

149. electric	189. fight	232. go
150. Ethel	190. finger	233. grocery
151. easy	191. Friday	234. goose
152. eraser	192. fall	235. garden
153. early	193. fare	236. grave
154. education	194. France	237. green
155. eight	195. ferry	238. ground
156. elect	196. front	239. got
157. enter	197. house	240. gasoline
158. early	198. hand	241. game
159. everyone	199. hat	242. globe
160. examination	200. hair	243. good
161. express	201. horse	244. grass
162. Edward	202. hill	245. German
163. eggs	203. heater	246. grade
164. eat	204. home	247. good-bye
165. envelop	205. have	248. ink
166. fat	206. has	249. ice-cream
167. February	207. hinge	250. iron
168. Fresno	208. hang	251. Ida
169. flag	209. happy	252. Isabel
170. floor	210. hot	253. is
171. flies	211. hook	254. it
172. flowers	212. hardware	255. Irene
173. found	213. Helen	256. ill
174. Frank	214. he	257. important
175. forehead	215. her	258. injure
176. father	216. hose	259. invitation
177. food	217. his	260. John ■
178. farmer	218. home	261. James
179. far	219. hip	262. Jim
180. from	220. how	263. Joe
181. fire	221. hope	264. Josie
182. Ford	222. hour	265. jump
183. first	223. hurry	266. June
184. fruit	224. handkerchief	267. January
185. fork	225. hen	268. jay
186. fast	226. heart	269. judge
187. fence	227. hospital	270. just
188. face	228. George	271. justice
	229. going	272. jewelry
	230. glove	273. key
	231. gas	274. knob

275. Kate	280. knew	285. lamp
276. kitchen	281. Lena	286. loaf
277. knee	282. look	287. light
278. knife	283. lady	288. let
279. kind	284. leaves	289. lily

Mental Ages	333. metal	379. property
9 years-10 years	334. monkey	380. paste
	335. number	381. pretty
290. lock	336. necktie	382. pearl
291. letter	337. nice	383. play
292. live	338. not	384. park
293. like	339. nail	385. post-office
294. little	340. nothing	386. question
295. lay	341. name	387. quiet
296. library	342. nine	388. ring
297. liberty	343. nickel	389. rat
298. mat	344. nook	390. rag
299. March	345. November	391. radio
300. May	346. niece	392. rock
301. money	347. nurse	393. rain
302. milk	348. navy	394. ran
303. mother	349. nation	395. room
304. music	350. neighbor	396. rug
305. moon	351. north	397. ruler
306. man	352. October	398. read
307. meat	353. outside	399. rich
308. Mary	354. own	400. rake
309. Michael	355. people	401. Rose
310. me	356. pole	402. roof
311. mud	357. Philip	403. race
312. map	358. pen	404. road
313. Maxwell	359. picture	405. receive
314. mail	360. pencil	406. remember
315. Miss	361. paper	407. station
316. Mr.	362. pink	408. soon
317. Mrs.	363. peach	409. San Mateo
318. machine	364. paint	410. September
319. mill	365. pants	411. soap
320. mama	366. Palo Alto	412. stove
321. mouse	367. pig	413. school
322. my	368. pillow	414. stamp
323. mail	369. penny	415. Saturday
324. mayor	370. Packard	416. Sunday
325. meant	371. page	417. short
326. measure	372. place	418. soon
327. minute	373. please	419. surprise
328. month	374. pass	420. south
329. mountain	375. people	421. sure
330. much	376. perfect	422. sheep
331. Monday	377. principal	423. Sam
332. mad	378. promise	424. see

425. San Jose	428. squirrel	431. star
426. sheet	429. school	432. sew
427. scale	430. sewing	
<hr/>		
Mental Ages—	462. three	494. vote
9 years-10 years	463. take	495. visitor
	464. their	496. visit
433. said	465. to-morrow	497. wood
434. sink	466. transfer	498. window
435. satchel	467. tiger	499. wash
436. shade	468. thing	500. washing
437. sugar	469. to	501. week
438. street	470. tub	502. women
439. sun	471. that	503. work
440. sky	472. Tom	504. Wednesday
441. sister	473. Tuesday	505. write
442. sofa	474. Thursday	506. word
443. sank	475. top	507. water
444. sing	476. tin	508. watch
445. sleep	477. taxi	509. wire
446. silver	478. think	510. wheel
447. stream	479. this	511. wine
448. school-room	480. train	512. William
449. swing	481. ticket	513. went
450. step	482. throw	514. wind
451. supper	483. thought	515. we
452. spring	484. two	516. walk
453. sight	485. uncle	517. where
454. salt	486. umbrella	518. wait
455. stay	487. up	519. were
456. table	488. United States	520. was
457. teacher	489. upon	521. with
458. there	490. vanity	522. wheat
459. tree	491. valise	523. you
460. test	492. Van Ness	524. yard
461. time	493. violet	525. yellow

HANDWRITING

Aim

Ability to form script letters and to connect them properly, as they occur in words, with such legibility and freedom as individual is capable.

Many of our atypical children are distinctly lacking in motor ability and as the muscular movements employed by writing specialists call for a high degree of motor control, we cannot adhere strictly to any set rules of a writing course.

Methods

1. Filling in large simple forms as squares, oblongs, triangles, circles, etc.

2. Filling in large double lined letters. Child's own initials at first.
3. Position and movement should be emphasized according to child's ability.
4. Tracing letters.
5. Copying letters.
6. Child's first name should be first word taught providing that it isn't too difficult.
7. Continue study of letter form.
8. Write simple words or phrases accompanied by corresponding pictures as a cat, box, a boy, a girl, a big boy, a little boy, dogs bark, etc.
9. Teach writing of name and address.
10. Children practice on blackboard and on large strips of paper accompanied by pictures.
11. Always stop practicing before child tires.
12. Write words, phrases and sentences taken from lessons in hygiene, civics, proverbs, etc.
13. Children should be allowed to use pen and ink as soon as they are able to do it neatly and efficiently.
14. Insist on neat, careful written work in all subjects.
15. Do not assign too long a written lesson at any time as it tends toward making the child hurry and thus become careless in the formation of the letters.
16. A set of model letters on blackboards is valuable.

MANUSCRIPT WRITING

From experience we have found that many atypical children, through the lack of co-ordination between the hand and the brain, muscular control or partial aphasia of the sense of form, find writing very difficult. Manuscript writing will be especially helpful for this group.

BIBLIOGRAPHY

Manuscript Writing by Cooch and Talbot—Harr Wagner, Publisher.

Many games which involve the muscular movements of the fingers should be given as picking up scraps of paper, pins, beans, threads, etc. Games outlined in the development of the sense of touch are valuable.

Left-handed Writing

Remember that an element of danger always exists in an attempt of changing a left-handed writer.

Mirror Writing

Changing the hand has been tried and proved successful. But again the teacher should always bear in mind the element of danger in changing the hand in writing and if such an experience is tried, the child should be watched closely for any undesirable effects as a result of the experience.

HISTORY

Aim

To give pupil a general knowledge of the outstanding events and characters in the history of the discovery and growth of our country.

Topics

1. Discovery of America—Christopher Columbus.
2. Revolutionary War—George Washington.
3. Civil War—Abraham Lincoln.
4. Spanish American War—Theodore Roosevelt.
5. World's War—Woodrow Wilson.
6. Period of Pilgrims—Thanksgiving Stories.
7. Pioneering—Daniel Boone and Indian Stories.
8. History of California—Boys' and Girls' California by Salisbury—Houghton-Mifflin Co. Pub. gives an excellent outline in story form for this topic.
9. History of San Francisco—Stories of the early pioneers and landmarks as Telegraph Hill, Portsmouth Square, Mission Dolores, etc. Bring out courageous spirit shown in the rebuilding of San Francisco after fire of 1906.
10. Inventors—Bell, Edison, Franklin, Ford, Fulton, Marconi, etc.
11. Teacher may add names of historical characters which are of special interest to children as one for whom school, near-by street, plaza, city or a member of the class is named.
12. Correlate with holidays.

Methods

Teach all the topics through stories, pictures, sandtable, posters and historical moving pictures.

Library table should be provided with books of easy reading historical stories.

BIBLIOGRAPHY

Instructory Literature Stories—F. A. Owens Pub., Dansville, New York. (Historical Characters.)

Early American History—Gordy, Macmillan Pub.

Story of Nancy Hanks—Ethel C. Phillips, Houghton-Mifflin Co.

Later American History—Gordy, Macmillan Pub.

When Great Folks were Little Folks—Dorothy D. Calhoun, Macmillan Co.

Colonial Children—Albert B. Hart, Macmillan Co.

Short American Stories—Blaisdell & Ball, Ginn & Co., Pub.

Pacific History Stories—Harr Wagner and Alice Rose Power, Harr Wagner Pub.

Letters of Polly the Pioneer—Stella H. Nida, Macmillan Co. Pub.

Boys' and Girls' California—Salisbury, Houghton-Mifflin Co. Pub.

History Stories for Primary Grades—John W. Wayland, Macmillan Co.

GEOGRAPHY

Aim

To teach such material as will have a life value for child.

(The work in geography must be definite, concrete and within child's mental capacity.)

Topics

1. World.
2. United States.
3. California.
4. San Francisco.
5. Plants and Trees.
6. Direction.
7. Distance.
8. Seasons.

Suggestive Methods

1. World

We have found that the most successful way of teaching geography to an atypical child is to start by giving a general idea of the world and lead child from that to our own country, state and city. Through the game of the flags of different countries of the world, which can be purchased in the toy department of any department store, accompanied by a map and globe of the world the children become familiar with the names of foreign countries, races, water ways, imports and exports. Stress should be laid on those countries which bear any relation to members of the class, imports, exports and to those races seen on our city streets.

Books should be made by pupils containing maps, literature and pictures relating to countries.

Outstanding Points

Pacific, Atlantic Oceans, Alps Mountains, London, Paris or any other city which bears a relation to any member of class.

United States

Atlantic, Pacific Oceans, Mississippi River, Rocky Mountains, New York, Boston, Detroit, Washington, Chicago, Los Angeles, San Francisco, Sacramento and any other city which may be of interest to children.

New York

Stories and pictures of New York to impress child with size and greatness of New York.

Boston

Stories of early American history.

Detroit

Stories of automobile industry.

Washington

The White House—Capitol.

Chicago

Great railroad center.

California Los Angeles

Moving picture industry.

Sacramento

Capitol of California. Stories of early history of city.

Oakland, San Jose and any neighboring city or town which are of interest to children.

Sierra Nevada, Coast Range Mountains, Yosemite National Park.

Sacramento and San Joaquin Rivers

San Francisco

Early history and growth of city.

Location of various public parks and buildings, as Civic Center, Post Office, Mint, Telephone, Standard Oil, Depots, Golden Gate Park, Ocean Beach, Legion of Honor and any other outstanding places in San Francisco.

Study through observation a hill, bay, waterfront, mountains, peninsula.

These points may be brought out through stories, moving pictures, literature furnished to tourists by hotels, transportation and sight-seeing companies.

Plants and Trees

Bring out the richness of California soil through her orchards and other agricultural resources.

Teach the names of common plants and trees. If possible bring children on walks where they may gather wild flowers. During wild flower season, teacher should aim to have various wild flowers in class-room. Leila Franc's California Wild Flower Songs should be taught.

Plant seeds and bulbs.

School gardens.

Life history of Luther Burbank.

Animals, Birds and Insects

Through stories, pictures, games, toy-making and pets, teach the most commonly known wild and domestic animals and birds. Bring out their value to man and how man should care for them, and necessity of eliminating harmful ones. Same with insects.

Direction

Start with east and west. The fact that the sun rises in the east and sets in the west will help to fix these directions.

Through games teach location of places of interest to children.

Teach direction of winds through smoke from neighboring chimneys, papers on street, clothes on wash lines, etc.

In connection with direction, teach the progress made in modes of travel.

Begin with primitive traveling-walking and early ways of traveling.

Picturesque means of travel in the Orient.

Early sailing vessels—present sea transportation.

Distance

Use unit of time to show distance instead of miles as three days to Chicago, instead of two thousand miles.

Time Tables.

Seasons

Teach the four seasons through weather conditions, flowers, etc. Take children out doors and study sky when it shows different weather conditions.

BIBLIOGRAPHY

San Francisco Public School Course of Study.

Literature furnished by Cunard Line Co., Ltd., 501 Market Street, San Francisco.

Literature furnished by the Southern Pacific, Santa Fe, Canadian Pacific Railroads and the various Steamship Companies.

Literature furnished by hotels and sight-seeing companies.

Boys' and Girls' California—Ethel I. Salisbury—Houghton-Mifflin Co. Pub.

Type Stories of the World for Little Folks—Ruth Thompson—Harr Wagner Co. Pub.

Our Neighbors—Near and Far—Ruth Thompson—Harr Wagner Co. Pub.

Around the World with the Children—Frank G. Carpenter—Macmillan Co. Pub.

Home and World Series—Revised Edition—James F. Chamberlain—Macmillan Co. Pub.

First Lessons in Geography—Philip A. Knowlton—Macmillan Co. Pub.

Pictures of Children of Other Lands—Ginn & Co.

Beginner's Geography—Miss Shepherd—Macmillan Co. Pub.

Tales from Silver Lands—Charles Finger.

Kak, the Copper Eskimo—V. Stefansson and Violet Irwin—Macmillan Co.

Bird Neighbors—N. Blancham—Macmillan Co. Pub.

Home Gardening for School Children—John L. Childs—Cal. Book Depository Co., 149 New Montgomery Street, San Francisco.

Books listed under Nature Study.

Maps

Children delight in tracing, drawing, and coloring outline maps.

Books of Maps—For Elementary Schools of California—Cal. State Series.

Graphs for Maps—Mary Fitzgerald—Harr Wagner Pub.

Outline maps obtained through various publishing companies.

Maps found in railroad and steamship companies' pamphlets.

NATURE STUDY

Aim

To develop in child a love and habit of observation for the beauty in nature and to acquaint him with some outstanding points in the lives and habits of the animals and insects which child meets in his environment.

Methods

1. Excursions.
2. School Gardens and flowers in class-room.
3. Stories.
4. Pets.
5. Useful and troublesome animals, birds and insects.

Topics

1. Pets and other well-known animals.
2. Birds.
3. Insects.
4. Trees.
5. Plants and flowers.
6. Vegetables.

Methods

1. Pets and other well-known animals

Teach names of pets and care. Kindness to animals.

Animals which are of use to man, as cow, sheep, pig, goat, horse, etc.

A few of the wild animals. Those whose names are familiar to children through stories, pictures and circus.

(The reference books furnish excellent stories for these lessons.)

2. Birds

Many of our children have a canary in their home. It would be well to start with canary. Teach how to care and protect it. Proceed to more common birds such as sparrows, robins, hummingbirds, pigeons, sea gulls, chickens, turkeys, ducks, goose, swan, etc.

Learn their value, protection which they need, and any troublesome traits.

3. Insects

Bring out dangers of harmful insects to man and how to control them. Point out beneficial traits. Teach common insects as flies, moths, ants, spiders, bees, etc.

Make lessons as concrete and interesting as possible.

4. Trees

Stories and short poems to bring out the life, sensitiveness, care, protection of trees and part trees play toward contributing to our comfort and happiness. Pictures and stories about the Big Trees of California.

5. Plants and Flowers

School garden, flowers and bulbs in class-room or in windows of neighboring florist.

Teach names of the best known California wild flowers, as California Poppy, Buttercup, Johnny-Jump-Up, Indian Paint Brush, Dandelions, Clover, Mustard, etc.

Learn wild flower songs.

Aim to have wild flowers with name written near vase in classroom during wild flower season.

Vegetables

Teach in connection with Health Education. Names and food values should be studied. School garden utilized.

BIBLIOGRAPHY

Biography of Luther Burbank—Child.

Stories found in books recommended for reading, language, history and geography.

Nature Stories—Mary Gardner—Macmillan Co.

The Farmer and His Friends—Eva M. Tappan—Houghton-Mifflin.

California Wild Flower Songs—Leila Franc—Elite Music Co., Los Gatos, California.

Wild Flowers—Katherine Chandler—Harr Wagner Co. Pub.

Society of Prevention of Cruelty to Animals Magazine, 2500 16th Street, San Francisco.

Get children interested in pet contests under Auspices of S. P. C. A.

The Story of Barry and other Selections—George T. Angel—The American Humane Educational Society, Boston, Mass.

Interesting Neighbors—Oliver J. Jenkins—Harr Wagner Co. Pub.

CIVICS

Topics

1. Civic Ideals.
2. Morals and Manners.
3. Thrift.

Aim

The most important task of the Atypical Class is that of training our pupils to become law abiding citizens, particularly those whose personality make-ups are such as tend toward making them anti-social. The proper social re-actions of these children must be made to function and law abiding habits formed. There are members of our groups who are so unstable in their behavior that all efforts to help them adjust themselves to social law and order fail. But this fact must not discourage us in our efforts to train the hopeful defective, of which there are large numbers. As this social training is our big task, we must lay special emphasis on civics. If we can instill in mind of child that the good of all depends upon the behavior of the individuals, we will make good citizens.

Points to be brought out in teaching the assigned topics

1. Obedience.
2. Cleanliness.

3. Punctuality.
4. Keep on sidewalk. Clear sidewalks of fruit peeling or any slippery substance.
5. Courtesy.
6. Thrift—School Bank Saving System—Talks and stories of successful men whose habits of thrift secured their success. Point out difference between thrift and being penurious.
7. Respect of others' property. Care of personal belongings, school building, furniture, playthings, sidewalks, parks, houses, gardens, fences, etc.
8. Morals and Manners. Games, drills, talks and stories used to form habits of morals and courtesy.

Drill on:

1. Not interrupting when someone else is speaking.
2. Using names of person addressed or answered.
3. Proper way of introducing strangers.
4. Use of polite expressions, I thank you, You are welcome, Please allow me, etc.
5. Not to pass between or in front of people.
6. Keep to the right.
7. Proper behavior in crowds.
8. Proper behavior in elevators, upon meeting and talking to ladies or older people.
9. Being considerate of children, ladies, older people in giving up seat in street cars, providing chairs and carrying parcels.
9. Our dependence on people who serve us, as the tradesmen, mechanics, police, mailmen, public servants, etc. To secure appreciation of their service by bringing out the idea of dependence—interdependence—co-operations.
10. Our duties to the group.
 1. Immediate Family.
 2. Class-mates.
 3. Neighbors.
 4. Humanity.

Children learn best by doing so that dramatization, Boy Scout and other organizations within school are most helpful in teaching civics.

The references will furnish excellent material for lessons.

Observance of special holidays and outstanding historical characters afford material for lessons.

Work in silent reading can be correlated with the civic lessons. Teacher types or writes questions on slips of paper. Children silently read their questions, study answer and then are called upon to answer their question orally. These questions should aim to bring out lessons taught in civics, as—Tell of three occasions when a boy lifts his hat—If you are due at school at nine o'clock what time should you leave home? etc.

BIBLIOGRAPHY

Sure Pop and Safety Scouts: Bailey—World Book Co. Pub.
Morals and Manners: Lucy Wilson and Others—Macmillan Co.

Our Home and Personal Duty: Jane E. Fryer—The Young American Readers.

Town and Civic Duty: Jane E. Fryer—The Young American Readers.

The First Reader for New American Citizens: Frances Mintz—Macmillan Co.

Good Citizenship through Story Telling: Forbes—Macmillan Co. Pub.

Heroes of Everyday Life: Fanny E. Coe—Ginn & Co. Pub.

Red Cross Emblem

Plain Buttons F. A. Owens, Publisher, Dansville, N. Y.

The American Flag

A Friend Indeed: Julia A. Schwartz—Macmillan Co.

PHYSICAL EDUCATION

Aim

1. To refresh mind and body.
2. To develop grace and ease.
3. To give vent to excessive energy.

If possible, teachers should follow the Course of Study in Physical Education used by the San Francisco Public Schools. The visiting Director of Physical Education will guide and assist teacher of Atypical Class.

Physical condition of atypical child must be known to teacher so that child will be protected from any form of exercises which might injure him. Consideration must be made for the atypical child who is not capable of making quick adjustments.

Suggestions

Kindergarten Group

The work of this group must be very simple and of interest to child.

1. Rhythm Work.
 - a. Running.
 - b. Marching: Follow the leader; Stepping over lines, erasers, etc., without touching. Learn to open and close door properly.
 - c. Picking up papers, pins, nails, etc.
 - d. Sense Training Games.

Apparatus Work

- a. Ladders: Climbing ladder and walking over rungs of ladder.
- b. Stairs: Learning to walk properly up and down stairs.
- c. Jumping rope.
- d. Kiddy-Kars.

Low Primary

1. Rhythm Work.
2. Marching: Single column; Follow the leader.
3. Skipping.
4. Stepping over cracks in floor, cement in yard, erasers, etc.

5. Learning to carry articles without dropping or spilling, as a number of books, a glass of water, etc.
6. Games.
7. Folk Dancing.

Apparatus Work

Ladders.
Ropes.
Rings.
Steps or stairs.
Horses
Kiddy-Kars.

Athletics

Single and Relay Races.

Games

Use suitable games found in the recommended game books and any other games which will appeal to child and be of value in Physical Education.

High Primary

1. Rhythm Work.
2. Imitation Work.
3. Marching: Single and double columns; Drills.
4. Skipping.
5. Folk Dancing.
6. Continue drill on opening and closing the door and moving chairs properly.
7. Learning to carry and pour liquids without spilling.
8. Watering the plants and garden.
9. Keeping the room in order.

Apparatus Work

Greater use of ladder, rings, rope, horses, etc.

Athletics

Relays, jumping, basket, soccer and baseball.

Games

See note under Low Primary Games.

Low Elementary

Drill on work of High Primary.

Military Tactics

Varied drills in marching: Column, counter, halting, facing, etc.

Apparatus Work

Still greater use of ladder, rings and ropes.

Athletics

Baseball, soccer, volley, relays, jumping, etc.

Boys of this group may take part in school activities if they are capable of doing so.

Games

See notes under other groups.

RELAXATION

Whenever occasion demands it, open windows and exercise quickly for a few minutes.

A period of rest during the day is most beneficial to child. At this time quietness prevails in room, strong lights shut off and child is made as comfortable as possible. Cots and mats can be utilized during this period. The majority of our teachers allot the first fifteen minutes of the afternoon session to this rest period. At that time the child is usually fatigued from the noise and strenuous play of the noon recess and welcomes the rest period. Occasional soft music on victrola or piano is soothing to the nerves of child during this period.

BIBLIOGRAPHY

Course of Study for Public Schools of San Francisco.

Ice-Breakers: Edna Geister—The Woman's Press, 600 Lexington Avenue, New York.

Games for the Playground and Home: Bancroft.

Camp Fire Girls' Manual: Bancroft.

Boy Scout's Handbook: Bancroft.

The Daily Dozen: Reprint by Collier's Weekly, New York—Walter Camp.

Victor Health Records.

Four hundred Games for Home and Playground: Acker.

Education of Defectives in Public Schools—Meta Anderson.

SENSE TRAINING MATERIAL

Smell

1. Have child smell and give name.
2. Blindfold child and have him smell and give name.
3. Have bottles filled with different liquids. Allow child to group bottles containing the same liquids.

Suggestive material

1. Ammonia.	8. Peppermint.
2. Camphor.	9. Spearmint.
3. Coffee.	10. Vinegar.
4. Kerosene.	11. Wintergreen.
5. Lavender.	12. Water.
6. Lemon.	13. Familiar flowers, vegetables, fruit, etc.
7. Oil of cloves.	

Touch

1. Show child how to touch.
2. Have child touch and give name.
3. Teach child how to wash hands properly.
4. Sequin and Healy Form Boards.
5. Bag containing various forms and articles. Child puts hand into bag, feels object, names it, and draws it out of bag.

Suggestive material

1. Wood	3. Glass	5. Small Cube
2. Lead	4. Square Prism	6. Sand Paper
7. Comb	8. Toothbrush	9. Hairbrush
10. Nails	11. Screws	
12. Knife.		
13. Fork.		
14. Spoon.		
15. Brush (Hand or Clothes).		
16. Soap.		
17. Tin.		
18. Iron.		
19. Sponge.		
20. Cork.		
21. Ball.		
22. Cotton.		

Colors

Red, Green, Yellow, Blue.

Cut up colored cloth and match colors.

Cardboard forms to match colors.

Building blocks to match colors.

Box of cloth to be cut and assorted according to color.

Box of knitted balls to match colors.

Box of knitted reins to match colors.

Weaving—using the above colors.

Sewing cards.

Thermic Sense

Have child feel water of varying temperature.

Baric Sense

Have child pick heavier of two or more weights.

Have child pick lighter of two or more weights.

Have child assort according to weight.

Taste

Molasses.

Ginger.

Cinnamon.

Sugar.

Cloves.

Cayenne.

Vinegar.

Salt.

Black pepper.

Mustard.

Alum.

Tea.

Water.

Cocoa.

Coffee.

Oil.

Chocolate.

Peppermint.



Have child taste and name article.

Have child tell whether sweet or sour.

Sound

	Have children close eyes, listen to sound and name it.
Cow bell	Blindfold one child—have a child in class call his name—blindfolded child names the one who calls.
Tea bell	
Jingle bell	Boxes containing pebbles, sand, corn, etc. Shake box and have child name substance.
Rattle	Listening to tick of clock.
Fiddle	Distinguish between sounds of hammer taps on wood, nails, table, floor, wall, etc.
Tambourine	Develop sense of direction. From what direction or place did sound come.
Clappers	
Triangle	Develop sense of pitch: high, low, soft, harsh, sweet, happy, sad, etc.

These suggestions can be elaborated through material found in books given in bibliography.

Forms

- Cylinders, whole and half.
- Square prisms, whole and cut in half.
- Triangles.
- Cubes of different sizes.
- Form board.

Hand Training

- Twisted papers to pick up one at a time; also pins.
- Outlining figures on peg board.
- Stringing beads, spools, buttons, button moulds, etc.
- Braiding strips: red, white and blue (Stripes stitched double).
- Block building.
- Paper cutting—Start with cutting lines.
- Paper-crayons.

Sight

Use colors and forms in various devices, such as assorting according to similarities and differences.

Place number of articles on table—allow child a short time to look at articles (telling him that you will remove one, two, etc., after he leaves room and when he returns to room he will be expected to name articles removed).

Have child leave room—remove article—recall child and have him name article removed. Increase number of articles removed as game progresses.

Have child imitate teacher in placing blocks (first in simple combination then in more complex ones).

Have child imitate teacher in drawing on blackboard (first lines then designs and figures).

Teach concretely terms of distance and size, such as, long, short, big, little, etc.

Balance

- Walking chalk line.
- Climbing ladder and walking between rungs of ladder.
- Use balancing pole.
- Balancing a book on head while walking across room or on chalk line.
- Carrying a cup of water while walking across room or on chalk line.

BIBLIOGRAPHY

- Education of Defectives in Public Schools:* Meta Anderson.
- Socializing the Child:* Sarah A. Dynes.
- Teaching Dull and Retarded Children:* Inskeep—Macmillan Co. Pub.
- “*Idiocy and its Treatment by Psychological Methods.*” : Edward Sequin (M. D.).
- “*Report on Education*”: Edward Sequin (M. D.).

HEALTH EDUCATION

Aim

Our chief purpose is to instill in child the desire and habit of observing health laws as a means of happiness.

Methods

As our aim is the formation of health habits rather than the acquisition of the facts in physiology and hygiene which are beyond the mental capacities of our atypical children, we will devote our time and energy to health lessons. These lessons must be presented in interesting and attractive forms through stories, poems, slogans, posters, bulletin boards, projects, simple plays and kindly checking-up on personal hygiene.

The Course of Studying Health Education—San Francisco Public Schools, and “A Program for Health Teaching”—Elementary Grades—U. S. Department of Education—Address: J. C. Boykin, Superintendent of Documents, Government Printing Office, Washington, D. C., may be used as a basis for Health Education in our classes.

These rules are important:

1. A full bath taken oftener than once a week.
2. Brushing the teeth at least once a day.
3. Sleeping long hours with windows open.
4. Drinking as much milk as possible, but no tea or coffee.
5. Eating some vegetables or fruit every day.
6. Drinking at least four glasses of water a day.
7. Playing part of every day out of doors.
8. A bowel movement every day.

Children of all groups are taught how to bathe, wash hands, care for teeth, hair, nails and clothing.

Systematic daily inspection of hands, nails, teeth, face, ears and neck. (This should be done in the kindest and most helpful way.)

Bath tubs and showers with hot and cold water are provided in our centers.

Individual tooth brushes, combs, orange sticks and clothes brushes are cared for in the class-rooms.

Liquid soap and paper towels are supplied by school.

Encourage children to drink milk during school sessions and to bring or buy proper lunches.

Games and devices.

BIBLIOGRAPHY

Course of Study in Health Education—San Francisco Public Schools.

A Program for Health Teaching—Elementary Grades—Address: J. C. Boykin, Superintendent of Documents, Government Printing Office, Washington, D. C.

Metropolitan Life Insurance Co., 600 Stockton Street (Free literature).

Dairy Delivery Milk Co., 216 Pine Street, San Francisco (Free literature).

Child's Health Alphabet—Rhymes of Cho Cho's Grandma: Mrs. Frederick Peterson—Macmillan Co., or Organization of America, New York City.

Child's Health Organization, 370 7th Avenue, New York City.

The Andress Health Series—Ginn & Co.

Child Health Organization, 370 7th Avenue, New York City will furnish additional literature.

Chalk Talks on Health and Safety: Walter Cobb—Macmillan Co.

Get list from Bulletin No. 39, Department of Public Education, Office of the Superintendent, May 22, 1926.

INDUSTRIAL WORK

1. Wood work.
2. Weaving.
3. Reed and Raffia Work.
4. Brush making.
5. Cobbling.
6. Sewing.
7. Knitting and Crocheting.
8. Housekeeping.
9. Cooking.

Woodwork, weaving, sewing, house-keeping and cooking are subjects which have a life value to child and therefore offer important training. The other topics should not be carried too far.

Aim

To train and develop the working mind and to develop muscular control. (The industrial arts offer various means and ways for training in ingenuity, accuracy, judgment, manual dexterity, appreciation of beauty in color and design, a feeling of achievement and number skill.)

Woodwork

Kindergarten

Hammering large nails into blocks of wood.

Hammering large nails into blocks of wood on lines and later simple designs.
Sandpapering.

Low Primary

Continue drill on work of Kindergarten.
Teach use of coping saw.

When this group gets to the stage where they can hit a nail on the head and saw a line, the next step is to learn to nail two pieces of wood together. This leads to making crude boxes and simple toys.

Always give problems which can be finished during the period.
Learn names and care of:

1. Hammer.
2. Coping Saw.

High Primary

This group should make articles involving more difficulties than the lower group. Projects should be given which are begun one day and finished the next day. Gradually their interest will be so increased that the time of working on projects can be extended to days and later into weeks with Low Elementary Group.

Learn names, care, use and adjustments of:

1. Hammer	2. Coping Saw	3. Small Planes
4. Hand Drill	5. Brace and Bit	6. Files
7. Try Square		

Suggestive Projects:

1. Shine, Nail, Salt, Knife Boxes.
2. Toy wagons and automobiles.
3. Cut-out toys.

Use and care of coping saw: Lay stress on importance of not getting the blade too hot so as to save it from breaking.

Low Elementary

Members of this group who are capable of doing the work of the regular manual training class for normal children are allowed to enroll in such classes.

This group should know in addition to the list of tools already given:

1. Crosscut saw.
2. Rip saw.
3. Turning saw—Back saw.
4. Auger bit.
5. Jack plane.
6. Smoothing plane.
7. Block plane.
8. Chisel.
9. Mitre box.
10. Compass.
11. Ruler.

Teach and demonstrate the important points of the tools as:

1. Crosscut saw—Always work across grain of wood.
2. Rip saw—Always work in direction of grain. Back saw used in small and accurate work.

3. Jack plane—To rough out work.
4. Smoothing plane—To produce smooth surface.
5. Block plane—To plane end of grain.
6. Bits—Use and correct way of placing bit in brace.
7. Mitre box—Use in sawing angles.
8. Try square—Laying off right angles to a straight edge.

Suggestive projects:

1. Toys (animal and cut-out novelties).
2. Wagons and scooters.
3. Cake boards.
4. Boxes (shine, salt, nail, mail, glove and button boxes).
5. Bird houses.
6. Game boards and puzzles.
7. Flag-base.
8. Racks (book, tie and letter racks).
9. Book cases and book ends.
10. Benches and stools.

BIBLIOGRAPHY

Local gift shops, toy sections of department stores and magazines offer excellent suggestions.

Essentials of woodworking: Ira G. Griffith—California Book Depository.

Woodwork for Beginners: Ira G. Griffith—California Book Depository.

Industrial Art Magazine—Manual Art Press, Peoria, Illinois.

Home-made Games: A. Neely Hall—Lothrop Lee & Shepherd Co.

WEAVING

Kindergarten

1. Weave strips of colored cloth through frame work of back of a chair.
2. Weave oil cloth strips with colored splints.
3. Weave mats with colored strips.

Low Primary

This group continues weaving mats with paper strips, yarn and raffia. Strive for straight edges.

High Primary

Small hand looms.

Rug making on large hand looms.

Rag, Braided and Yarn Rugs.

Low Elementary

Continue rug making on a more elaborated scale.

Stories of the history of rugs. Correlate with geography lessons. Cotton industry, soil, climatic conditions and people engaged in the industry of cotton and rug making.

Visit one of factories and weaving shops.

LOOMS

Try to interest child in loom before beginning on the work. Allow pupil to watch while work is going on.

Their first work is on a two-harness loom with coarse material. Not rags, as rags are too tedious to prepare. Use coarse jute with a coarse warp. Make bags in bright colors.

Patterns

Usually after weaving two bags, the pupil is able to control the edges well enough to go into finer work.

The temperament of child must be considered in deciding size of next piece of work. This work will be on a four-harness loom. It will be the first pattern work. The pupil works on this loom until edges are good and can weave without mistakes.

The pupil is now ready to work on more difficult designs: scarfs, runners, etc.

Setting up loom

Child is not expected to set up loom until they are very good weavers, as it is a difficult task. They help with the setting up of the loom many times before given the responsibility of doing it alone.

BIBLIOGRAPHY

Weavers and Other Workers: J. Hall—California School Book Depository.

“Shuttle Crast Guild”: 40 Ash Street, Cambridge, Mass.

Mrs. Atwater: 40 Ash Street, Cambridge, Mass., for Yearly Bulletin and Correspondence Course.

Swedish Applied Arts: 2519 Webster Street, San Francisco, Calif.

“Foot Power Loom Weaving”: Edward Worst.

REED AND RAFFIA WORK

Reed should never be allowed to remain in water over one hour and soak just enough reed to be used in the lesson of the day. Cold water requires about an hour's soaking and hot water about fifteen minutes.

Have spokes two numbers coarser than weavers in making large baskets.

One number coarser with the smaller baskets.

For small baskets, numbers 1, 2, 3 and 4 work out well.

For larger baskets, numbers 3, 4, 5 and 6.

Suggestive Projects

1. Baskets of various shapes and uses.
2. Trays.
3. Flower-holders.
4. Various suggestions from shops.

Raffia Work

Raffia should always be dampened for use.

Suggestive Projects

1. Weaving mats on cardboard discs or cards. (Bags, purses, napkin rings, brush-holders, etc.)
2. Braiding raffia. Later made into reins, mats for porch seats, etc.
3. Covering jars for flower retainers.

BIBLIOGRAPHY

San Francisco Course of Study for the Public Schools.

Practical and Artistic Basketry—California Book Depository, 149 New Montgomery Street.

Lessons offered in the Art Departments of the San Francisco Department Stores.

BRUSH-MAKING

Explicate directions on Brush-making are given in "The Boston Way," published by the Special Class Teachers of the Boston Public School Department.

Business Agent: Katherine Coveney—George T. Angell School, Boston.

COBBLING

Preliminary lessons on leather should be given before taking up the work of cobbling.

This work should not be attempted with immature and careless pupils.

Begin with repairing old glove.

Equipment

1. Supply of medium weight sole leather. Order by pound. One pound to square foot.
2. Iron Standard.
3. Lasts—several sizes.
4. Nails, $\frac{5}{8}$ -in. for soles and $\frac{3}{4}$ -in. for heels.
5. Hammer.
6. Awl.
7. Snips.
8. Wax.
9. Thread.
10. Blackening.

BIBLIOGRAPHY

Boston Way, page 124: gives helpful suggestions. Published by The Special Class Teachers' Club, Boston, Mass.

Teaching Dull and Retarded Children: Inskeep—Macmillan.

SEWING

Aim

1. To give child a knowledge and appreciation of suitable clothing for different occasions.
2. To teach child simple repairing of clothing, such as sewing rips, patching and darning.
3. To teach child to make simple garments.
4. To teach care of clothing.

Methods

1. Use kindergarten sewing cards as preliminary work.
2. Position in sewing.
3. Method of threading a needle.
4. Making a knot.
5. Use of thimble. Proper finger for thimble.
6. For practice on the above points, sew on buttons: two-holed buttons first.
7. Basting stitch. Checked material of great value in keeping straight lines. Make sachet bags with ravel tops.
8. Overcasting to prevent raveling. Overcast marble, bean bags, etc.
9. Turning a hem. Use for practice work a cloth about six inches long. Baste and hem cloth.
10. Motivate this knowledge by hemming towels, dusters, doilies, etc.
11. Teach back stitching to take place of machine stitch.
12. Make cooking aprons, pot-holders, towels, etc.
13. Make easy stitches used in fancy work or finishings as blanket or button-hole stitch, feather stitch, etc.
14. Make button holes.
15. Teach putting pockets on aprons.
16. Whenever possible embroider or applique work.

Sewing Machine Work

In beginning machine work allow child to treadle with both feet at varying degrees of speed until this can be done evenly and stopped at will.

During this practice have the needle unthreaded or removed.

1. Sew two pieces of cloth about six inches long. Turn, baste, and sew on machine.
2. Make a felled seam.
3. Make a French seam.
4. Make cooking cap and bag with French seam, bloomers, princess slip, plain dress.
5. Use of simple patterns. Dresses made in miniature colored paper patterns.
6. Pressing of garments.
7. Acquaint child with a selvedge, a fold, a raw edge and different kinds of threads used in sewing and the manufacture of cloths. (Cotton, linen, wool and silk.)

8. Don't keep child on practice any longer than is necessary. Experience teaches that a child when working on an article of life value, not only does better work but gets the practical knowledge which is our goal.

Fashion books, samples of various cloths and patterns should be on display. Model miniature dresses of the ones on which child is working always arouse interest.

9. Encourage boys to learn to sew on buttons and do simple repairs.

KNITTING AND CROCHETING

Both these subjects have a quieting effect on child and therefore are beneficial with neurasthenic and psychopathic cases.

Crocheting is considered more difficult than knitting.

Knitting

1. Toy-knitters (Mats, wash-cloths, doll rugs, etc.).
2. Squares (Afghan Quilts).
3. Sweaters.
4. Scarfs.

Crocheting

1. Teach chain stitch (Lingerie ribbons, curtain strings, etc.).
2. Stitches for finishing work made in sewing class.
3. Caps, sweaters, scarfs, etc.

BIBLIOGRAPHY

Art sections in the various Department Stores offer excellent suggestions.

HOUSEKEEPING AND COOKING

Housekeeping and cooking have a life value and should not be neglected. Boys as well as girls should be included in lessons.

Aim

1. To develop a habit of orderliness and cleanliness.
2. To teach food values.
3. To teach pupil the art of marketing. To buy economically and yet have nourishing food.
4. To teach the preparation and cooking of simple practical recipes.

HOUSEKEEPING

1. Use of doormat.
2. Begin with child own desk. Strive to overcome untidy habits.
3. Care of classroom. Keep floor clear of papers and other loose articles.
4. Care of blackboards, erasers, cabinets, plants, flowers and proper ventilation of room.
5. Talks on care of different rooms in homes. Arrangement of flowers and interior decorations.
6. Care of clothing and proper hanging of wraps.

COOKING

Equipment

1. Apron with bib long enough to cover dress.
2. Cap.
3. Towel.
4. Bag.
5. Book and pencil for those who are able to copy recipes.
1. Teach care of kitchen. (Sink, stove, utensils, ventilation, dangers and waste of gas, garbage cans, etc.)
2. Discuss heating and lighting of our homes:
 - History of fire.
 - Discuss fuel.
 - Contrast our comforts in heating in comparison with Eskimos, Europeans, Orientals.
 - History of lighting our homes.
 - Candles.
 - Lamps.
 - Gas.
 - Electricity.
3. Teach names and use of the most common kitchen utensils as a bread knife, can opener, egg beater, measuring cups, double-boiler, percolator, toasters, etc.
4. Keep screen door and screen on windows closed.
5. Dust with a soft oiled cloth.
6. Foods in general should be discussed:
 1. Foods which we need every day: milk, bread, butter, cheese, fruit, meats and vegetables.
 2. Interesting lessons in spelling, language, history and geography can be correlated with the discussion of food as to make a list of different foods. Learn to spell and use words in sentences, etc.
 - Milk—value and care.
 - Bread—Have lessons on wheat. Discuss and learn how to make.

ART

Topics

1. Drawing.
2. Color.
3. Design.
4. Block Lettering.
5. Appreciation of good pictures.
6. Paper construction.
7. Clay modeling.

DRAWING

Aim

To develop a natural method of self-expression.

Some atypical class children show special artistic ability. These children should be directed and encouraged to exercise this ability.

Methods

Kindergarten

Tracing and coloring of simple subjects selected from child's immediate interests.

Low Primary

Tracing, coloring and spontaneous drawing on blackboard, manila and bogus paper; illustrating experiences of child.

High Primary

Elaborate work of low primary. Draw flowers, fruit, vegetables, trees, objects and simple landscapes.

Low Elementary

Continue work in tracing and coloring. Develop form and perceptive. Draw flowers, fruit, vegetables, trees, birds, objects and landscapes.

Suggestions for these lessons will be found in the references given for work in art.

COLOR

Aim

To develop an appreciation of harmony in color.

Whenever possible allow children to arrange or help to arrange flowers for the classroom. Teach artistic value of long stems and loosely arranged flowers. Also harmonizing containers and flowers.

Kindergarten

Use of crayons. Primary colors.

Color simple outlined pictures and forms.

Low Primary

Crayons—Secondary colors—Games, seat-work and charts used for study of colors. Color simple toys made by child. A hot iron rubbed on drawing will set color. Color simple outlined pictures, flowers and forms.

Charts and color books.

Braiding colored cloth strips. Assorting different colored cloths.

Color games found in references for games.

High Primary

Crayons, water colors, paints, alabastine, and paints made from sealing wax and alcohol.

Charts, color books, seat work and color games.

Mixing of secondary colors.

Color flowers, leaves, trees, birds, fruits, vegetables, objects and simple landscapes. Cut-out work.

Low Elementary

Crayons, water colors, paints, alabastine and charcoal.

Mixing of secondary colors. Tones.

Color flowers, leaves, trees, birds, fruit, vegetables, objects and landscapes.

Paint and color toys and articles made during woodwork period.

Paint or color with alabastine, baskets and other reed or raffia work.

Wax work: Dennison's book on Sealing Wax Art furnishes excellent suggestions.

DESIGN

Kindergarten

Simple forms with pegs, sticks, beans, colored paper forms.

Games and devices found in the references.

(See outline listed under Weaving.)

Low Primary

Elaborate on work of kindergarten.

Weaving.

High Primary

Design games.

Weaving.

Decoration for articles made during woodwork or sewing period.

Booklets and charts.

Low Elementary

Continue work of high primary, gradually making work more implicate.

Point out good design work in pictures, tapestry and cloths.

Note

The children of all groups enjoy imitation work of an orderly arrangement of dots, lines and curves which form designs.

Teacher illustrate on board. Children copy each step. Later children will draw their own designs.

Boston Way, page 62 and references give illustrations.

APPRECIATION OF GOOD PICTURES

Aim

To acquaint child and create within him an appreciation of good pictures, and the correct arrangement and hanging of pictures on wall.

Methods

1. A collection of many good pictures and photographs (In scrap books and on wall).

2. Suggestive Pictures.

Baby Stuart—Van Dyke.

Holy Night—Carreggio.

Sistine Madonna—Michelangelo.

Madonna of the Chair.

Any of Jessie Willcox Smith's Reprints.

Suitable magazine covers.

3. Stories relating to pictures.

Note

Picture-puzzle of pictures studied, made during woodwork period will help fix appreciation.

BLOCK LETTERING

High Primary Low Elementary

Block lettering is considered as a valuable training for Atypical Children.

PAPER CONSTRUCTION

Aim

To develop motor control, later use of tools in woodwork and to give child habit of neatness and accuracy.

Kindergarten

This group will have to be taught to use the scissors. Many will find this difficult through lack of motor co-ordination. Much practice on cutting pieces of paper until child can manipulate scissors.

1. Cutting newspapers for filling pillows.
2. Cutting on lines.
3. Cutting out simple forms as squares, circles, triangles, etc.
4. Cutting outlines around pictures in magazines, papers, etc.

Low Primary

1. Cutting pictures to be used as part of posters or illustrations for stories.
2. Cutting of strips of rags which can be used in rug making.
3. Free cutting of simple things which will interest child.
4. Paper construction of simple articles as a box, basket, frames.

High Primary

1. Continue cutting pictures for posters, scrap books, etc.
2. Continue paper construction work. Make patterns for wood-work.
3. Cutting from memory animals, dolls, silhouettes, etc.
(Children always enjoy making caps from a double sheet of newspaper.)

Low Elementary

1. Continue cutting for posters and illustrations.

Dennison's literature on crepe paper devices will furnish suggestions for holiday work.

Make patterns for woodwork.

Built-up Posters: Flowers, Child Life, Birds: Ideal School Supply Co.—Weber Co., Agents.

Built-up Posters—Milton Bradley Pub.

Posters drawn and put together by children.

Posters made from pictures outlined and colored by children.

CLAY

Aim

To develop sense of form and motor control.

Kindergarten

Simple forms as cubes, balls, stripes, marbles, eggs and nest, boats, aeroplanes, gingerbread, boy, etc.

Low Primary

Simple forms as bowls, fruit, cakes, figures, etc.

High Primary

Fruits, forms, figures, etc.

Low Elementary

Review work of High Primary and add tiles, book ends, bowls, buildings and other illustrations for sand table.

Cakes of white Crystal Soap may be used for modeling public buildings.

BIBLIOGRAPHY

Course of Study—San Francisco Public School Department.

Instruction Books of Dennison Craft.

The New Augsburg's Drawing—California Book Depository.

Industrial Art Text Books: Snow & Forelich—California Book Depository.

The Graphic Drawing Books: The Prang Co.—California Book Depository.

Industrial and Applied Art Books: Mentzer, Bush & Co.—California Book Depository.

Applied Art: Pietro Lemos—Emporium.

Material from Harter & Co.: Weber & Co., Publishers.

Material from Milton Bradley Co.

Cardboard Construction: J. H. Tryborn—California School Supply Co.

MUSIC

Aim

1. To give pleasure and healthy outlets for emotions.
2. To develop a taste for good music and a good singing voice.

Methods

Victrola and piano are valuable aids.

Records for Nursery Rhymes and other suitable songs are available.

Rhythm and orchestra work are essential.

Teaching the recognition of various musical instruments through victrola records.

Two part song work whenever possible.

Glee Club if group is large enough.

Aim to have list of songs include:

1. Patriotic Songs.
2. Songs used in Community Singing.
3. Morning and Evening Songs.
4. Seasonal Songs.
5. Special Day Songs.
6. Action and Dramatization Songs.
7. Popular Songs.

Our children delight in singing the popular songs. Whenever suitable, these songs should be taught.

BIBLIOGRAPHY

Music Books recommended and outlines distributed by Director of Music—San Francisco Public Schools.
Silver Song Series—Silver, Burdell & Co.
California Wild Flower Songs: Leila Franc—Elite Music Co., Los Gatos, California.
Songs of Childhood: Music Educational Series. Accompanied by records—Ginn & Co.
The Bubble Book—The Harper—Columbia Books that Sing—Harper Bros., Publishers.
Songs of the Child World—Riley and Gaynor.
Kindergarten Chimes: Kate Douglas Wiggin.
Stories in Song—Emerson and Brown.
Merry Time Songs for Children—Charles H. McCurrie.
Festivals and Plays for Children: Francis M. Arnold—Willis Music Co.
Dramatized Rhythm Plays: John N. Richards—California School Book Depository.
School Rhythms—For Kindergarten and Low Primary Grades: Ethel M. Robinson—Clayton F. Summy Co., Chicago.
The Rhythms of Childhood: Carolina Crawford and Elizabeth Rose Fogg.

CORRECTIVE SPEECH

Under direction of Corrective Speech Department—San Francisco Public Schools.

Give daily drills to entire class.

All children who have a speech defect and are capable of taking part in the corrective speech lessons should be sent regularly to the Corrective Speech Class within school building.

SUGGESTIVE PROGRAM

9.00- 9.15	Opening Exercises. 1. Salute to flag. (Omit if flag has been saluted in school-yard.) 2. Singing. 3. General talks on topics: the day, morals and manners. 4. Stories, Poems, Nature Study.
9.15- 9.25	Arithmetic. Low Elementary—High Primary: Oral, Dictation, and blackboard work. Kindergarten and Low Primary: Seat and hand-work relative to arithmetic.
9.25- 9.40	Arithmetic. Kindergarten and Low Primary: Oral, Concrete counting, Tracing and copying numbers. Low Elementary and High Primary: Written work.

9.40- 9.50	Low Elementary and High Primary: Oral Language.
	Kindergarten and Low Primary: Seat or hand-work relative to language.
9.50-10.00	Kindergarten and Low Primary: Oral Language. Low Elementary and High Primary: Studying spelling.
10.00-10.10	Physical Education (outdoors if possible).
10.10-10.20	Health Education.
10.20-10.30	Nutrition Period. Milk with bread and butter or crackers are served.
10.30-10.45	Recess.
10.45-10.55	Penmanship.
10.55-11.00	Low Elementary and High Primary: Dictation of spelling. Kindergarten and Low Primary: Blackboard work. Copying alphabet and simple words or sentences.
11.00-11.05	Daily corrective speech drills. Entire class.
11.05-11.20	Kindergarten and Low Primary: Oral Reading. Low Elementary and High Primary: Silent Reading.
11.20-11.40	Low Elementary and High Primary: Oral Reading. Kindergarten and Low Primary: Seat or hand-work relative to Silent Reading.
11.40-11.55	Civics, Geography, History, Written Language. Kindergarten and Low Primary: Blackboard, seat or hand-work.
11.55-12.00	Preparation for noon dismissal. Song, poem, proverbs or slogans.

NOON RECESS

Housekeeping and cooking are taught in the preparation, serving, clearing of table, washing of dishes and putting the room in order after luncheon.

Luncheon is served in some classes. In other classes the children bring their lunches. In both cases luncheon is served at prettily set tables in the classroom. The teacher has her lunch with children and supervises the table etiquette.

Girls who are capable enroll in the Domestic Science Class within school building.

Likewise, boys who are capable enroll in the Manual Training Class within school building.

1.00- 1.15	Rest Period.
1.15- 2.25	Industrial Work. Art.
2.25- 2.30	Preparation for dismissal. Song, poem, proverbs or slogans.

BIBLIOGRAPHY FOR GENERAL READING

Edward Sequin: *Idiocy and Its Treatment by Psychological Methods.*

Henry Goddard: *Feeble Mindedness: Its Causes and Consequences.*

Henry Goddard: *Human Efficiency and Levels of Intelligence.*

Henry Goddard: *The Kallikak Family—A Study in Heredity of the Feeble-minded.*

A. Tredgold: *Mental Deficiency.*

Augusta Bronner: *The Psychology of Special Abilities and Disabilities.*

William Healy: "The Individual Delinquent."

William Healy: *Honesty.*

Edward Conklin: *Heredity and Environment.*

John B. Watson: *Behaviorism.*

William James: *Principles of Psychology.*

William White: *The Mental Hygiene of Childhood.*

Michael Guyer: *Being Well Born.*

Lewis Terman: *The Hygiene of the School Child.*

Lewis Terman: *The Intelligence of School Children.*

Leta Hollingsworth: *The Psychology of Subnormal Children.*

Leta Hollingsworth: *Special Talents and Defects: Their Significance for Education.*

Barbara Morgan: *The Unadjusted School Child.*

G. Stanley Hall: *Content of Children's Minds.*

Hector Cameron: *The Nervous Child.*

Lillian Martin and Clare Gruchy: *Mental Training for the Pre-School Child.*

Ira Wile: *The Challenge of Childhood.*

Edwin Kirkpatrick: *The Individual in the Making.*

Maurice Bigelow: *Sex Education.*

Thomas Galloway: *The Biology of Sex.*

Thomas Galloway: *Sex and Social Life.*

Albert Moll: *The Sexual Life of a Child.*

Dr. Inskeep: *Teaching Dull and Retarded Children.*

The Special Class Teachers, Boston: *The Boston Way.*

PERIODICALS (For Classroom help)

Childhood Education: Published by I. K. U. Subscription \$2.50 Year.

A Child's Garden: For Cheerful Children and Happy Homes—916 Kearny Street.

Normal Instructor and Primary Plans: F. A. Owens, Dansville, New York.

Ungraded—Published by Ungraded Teachers Association of New York City. 17 Lexington Avenue, New York City.

Mental Hygiene—Published by National Committee for Mental Hygiene, 370 Seventh Avenue, New York City.

Journal of the American Society for Psychical Research—Published in York, Pennsylvania.

Journal of Educational Psychology—Published in Baltimore, Maryland.

Training School Bulletin—Vineland, New Jersey.

Journal of Abnormal and Social Psychology—Albany, New York.

OUR ATYPICAL CLASS SLOGAN

“When you have tried all methods with a child and they have failed. Don’t give up, try some more.”

SAN FRANCISCO PUBLIC LIBRARY



3 1223 03565 0010

San Francisco Public Schools
City and County of San Francisco

Course of Study
in
Health Education



January, 1925

SAN FRANCISCO PUBLIC SCHOOLS
CITY AND COUNTY OF SAN FRANCISCO

Course of Study in
Health Education

JANUARY, 1925



Board of Education

FRED DOHRMANN, JR., President

ALFRED I. ESBERG	DANIEL C. MURPHY
IRA W. COBURN	ALICE ROSE POWER
MRS. ERNEST J. MOTT	MRS. MARY PRAG



Superintendent of Schools

JOSEPH M. GWINN



Deputy Superintendents of Schools

A. J. CLOUD, Chief Deputy

WILLIAM H. DeBELL	BERTHA E. ROBERTS
DR. A. A. D'ANCONA	R. H. WEBSTER
DAVID P. HARDY	

INDEX

Page	Page		
Aim of Health Education.....	9	Informational Content:	
Alcohol	59	Kindergarten	40
Bacteria.....	55, 60	First Grade.....	40
Bibliography	66	Second Grade.....	40
Calories	53	Third Grade.....	40
Candy	31	Fourth Grade.....	44
Checking Individual Health Habits	12	Fifth Grade.....	48
Cleanliness	43	Sixth Grade.....	51
Clothing	42	Seventh Grade.....	60
Clubs	36	Eighth Grade.....	64
Coffee.....	31, 60	Immunity	62
Communicable Diseases	61	Kindergarten	23, 25, 40
Community Health	64	Methods.....	29, 33, 37, 47, 65
Correlation	35	Morning Inspection.....	11
Debating	38	Mosquitoes	62
Directions for Weighing and Measuring	17	Natural Basis for the Development of Health Habits.....	7
Dramatization	36	Patent Medicines.....	63
Ears	47	Plays	67
Eighth Grade.....	14, 21, 22, 29, 64	Posters	34
Elimination	42	Posture, Value of Good.....	23
Exercises	42, 48	Posture, Bancroft Triple Test.....	24
Eyes	46	Readings	67
Feet	47	Records:	
Fifth Grade.....	13, 21, 27, 48	Achievement	10
First Aid	43	Health Habits.....	12
First Grade.....	12, 13, 20, 23, 25, 40	Physical Activities.....	19
Flies	62	References for Teachers.....	66
Food	41, 51, 52	Rest	50
Food, care of.....	55	Safety First.....	43
Food, value of.....	57, 58	Second Grade.....	13, 20, 23, 25, 40
Foreword	5	Serums	63
Form for Individual Record of Health Habits.....	15	Seventh Grade.....	14, 21, 28, 60
Fourth Grade.....	13, 20, 26, 44	Sixth Grade.....	14, 21, 27, 51
Grades:		Sleep	41
Kindergarten.....	23, 25, 40	Standards of Attainments.....	25-29
First.....	12, 13, 20, 23, 25, 40	Sunshine	42
Second.....	13, 20, 23, 25, 40	Tea	60
Third.....	13, 20, 23, 26, 40	Teeth	45
Fourth.....	13, 20, 26, 44	Tests in Organic Efficiency and Skill.....	20-22
Fifth.....	13, 21, 27, 48	Texts for Pupils.....	67
Sixth.....	14, 21, 27, 51	Third Grade.....	13, 20, 23, 26, 40
Seventh.....	14, 21, 28, 60	Tobacco	59
Eighth.....	14, 21, 22, 29, 64	Underweight Group.....	17
Health Attainments.....	40	Vaccines	63
Health Clubs.....	36	Ventilation	41, 44
Health Habit Records.....	12	Vitamines	53
Health Plays.....	67	Water	42
Health Posters.....	34	Weighing and Measuring.....	17
Hygienic Conditions Requiring Attention of Teacher.....	10	Weight—Height—Age Table:	
		Girls	18
		Boys	19
		Weight Records.....	15
		Writing for a Purpose.....	39

FOREWORD

The program of health education in the public schools of San Francisco began in 1918 with the establishment of two open-air schools for children who had been exposed to tuberculosis or were habitually underweight. The open-air classes were maintained by the Board of Education with the co-operation of the San Francisco Tuberculosis Association. Following this, a health survey of 44,500 pupils was made by the Board of Education with the co-operation of the San Francisco Tuberculosis Association, the California Tuberculosis Association, the San Francisco Board of Health, the State Board of Health, the Public Health Section of the Civic Center and other civic organizations. Nutrition classes were organized with the help of the Department of Home Economics of the Board of Education and the school nursing staff under the direction of the Board of Health. An intensive campaign was inaugurated to remedy physical defects. In 1921 scales were placed in all the schools and the children have been weighed and measured systematically to the present time. The results have been carefully tabulated and will be utilized in the construction of a Standard Height and Weight Table for San Francisco children. Under the direction of the Home Economics Department bread and milk mid-morning lunches are served in all the schools.

In the fall of 1921, the Board of Education authorized the San Francisco Tuberculosis Association to establish a program of health education in the John Swett and the Daniel Webster Schools. In co-operation with the American Child Health Association, the San Francisco Tuberculosis Association appointed Mrs. John Collier to establish the program in the two schools selected. In this, Mrs. Collier had the enthusiastic and effective co-operation of the principals of these schools. During the following year the health education program was extended to ten additional schools.

In January, 1923, upon the resignation of Mrs. Collier, Mrs. Daisy Alford Hetherington, Ph.D., was appointed to direct the program of health education.

In 1923 and the first term of 1924, the course in health education was introduced into fourteen additional schools. Mrs. Hetherington, acting under the direction of the Children's Committee of the San Francisco Tuberculosis Association, had the assistance of the principals and of a group of teachers, one from each school in which the course in

health education had been conducted, acting as an advisory committee. The practical suggestions made by the teachers have been of inestimable value.

The complete program as now outlined and in operation is the result of the work of San Francisco teachers, under the leadership of Mrs. Hetherington. No academic program was devised and imposed. The program is the result of experience in the classrooms of the San Francisco schools. In its main features, this course of study in Health Education follows the Curriculum for Primary and Grammar Grades, as recommended by Mrs. Hetherington to the San Francisco Tuberculosis Association. It is approved by the Board of Education. In it is included a statement by Mrs. Hetherington upon the Natural Basis for the Development of Health Habits.

J. M. GWINN,
Superintendent of Schools.

THE NATURAL BASIS FOR THE DEVELOPMENT OF HEALTH HABITS

Good health habits are developed in two ways. In the earlier years the child acquires, through association with adults, habits of acting in regard to eating, sleeping, elimination, exercise, and so forth, that are largely the product of an imitation of adult habits of acting. The child does little thinking; he simply acts according to custom and the prescription of his elders.

As the child grows older and his environment expands, it becomes necessary that he know the reasons for his health practices. Conditions are different, temptations greater, and the habits acquired by a relatively unthought method will survive or perish according as the child sees the need and the value of the habits.

Help the Child to Think

There is, therefore, no question as to the importance of the child's being given the opportunity to think out his health problems as early in life as possible. The only valuable or enduring habits are those that result from thinking out life situations.

The recognition of these two ways of establishing health practices is very important to the teacher or leader in health education. In the very early years, survival demands that some practices be established through imitation or coercion, but a habit formed through imitation or coercion leaves the individual in a changed environment at the very mercy of released impulses or of sensuous stimuli. And it is because habits thus formed are subject to the influence of every fad or unsound dogma that constructive educational leadership is necessary. Every child must have the ability to judge health situations and he must have the information that will enable him to evaluate wisely.

We often hear it said that the child who lives under an ideal environment during the first seven years of his life is safe, regardless of the temptation that the future may bring. It is of course possible, though in practice never realized, that a child's life might be so organized by the home, the school, and the community, that perfect health habits might be developed—through an unthinking conformity to adult customs and habits. But such an organization would not be effective, because the individual is helpless in the new untried situation. The habits that come into being because of reflection alone guarantee right conduct.

Give His Habits a Rational Basis

This does not assume that good habits acquired in these early years without thinking are to be scorned. They are essential to survival and they have the advantage from the economical aspect of not having to be unlearned; but it is just as essential that these habits be given a rational basis as soon as possible.

The teacher must recognize these two methods of establishing health habits, but it is probably even more important that he appreciate fully the conditions that must prevail before the child will think health situations.

Because of our century-old faith in the educative value of information, regardless of how that information is acquired or what connection it may have with meaningful situations in life, we are still prone to believe that if we classify information and pour it into the child's mind, there will result, by some magical process, correct habits of acting.

Had this been true, certainly the world would have long since been morally and socially recreated.

The truth seems to be that information may or may not hamper the thinking process. In adult life we seek and use information when we need it to help solve the difficult situations of life. There is no difference in child life. Information, if it is to affect child conduct, must help in the solution of child problems. The child can easily fail to practice every one of them. The only guarantee that he will think them and practice them is that he sees how they help him in carrying out his purposeful life activities.

Therefore, in developing a health curriculum, the first essential is the organization of the self-impelled activities of child life that require health information in order that they may be successfully carried on.

The Real Spur to Activity

The most important of these activities, from the standpoint of health, is unquestionably the vigorous big muscle activities, often spoken of as the play activities. In these activities the child drives himself into action because he experiences satisfaction in the action. He desires to surpass, not only his own records, but the records of his mates. Any information that will help him in attaining these goals is eagerly laid hold of, and tends to affect conduct just in proportion as the child sees its relation to the successful development of the activity—the achievement of his goal.

There is probably no more striking example of information affecting conduct than the eagerness with which the boy disciplines himself in regard to smoking, eating or sleeping when the success of his team depends upon his physical condition. He applies with unrelenting diligence every bit of information that he is able to acquire that will help him toward his goal. Thus he becomes, by thinking out and acting upon a social, moral, physical, intellectual life problem, a self-disciplining, self-directing being.

Exercise the Source of Organic Development

The other fundamental reason for using the vigorous, big muscle activities as the core of a health curriculum is that they are the only *important source of organic development*. In these activities the child gains his strength and endurance. On this point there seems to be some variance of opinion among educators. The three fundamental factors controlling health are diet, rest and exercise. This is, I take it, quite generally accepted. No one would question the importance of diet or of rest, but many fail to see that even though an infant be fed properly and allowed to rest properly, it cannot develop normally without proper exercise.

There is an inherent momentum toward growth which causes the infant to grow if it has proper food and rest. But the only factor

which develops the latent capacities in the organism is exercise—exercise of the big muscles of the body.

Because of the failure to comprehend the real significance of exercise in the normal development of healthy children, parents and educators have long been willing to ignore the play life of the child, to leave it unsupervised, and in general to scorn its claim to a place in an educational program.

(1) *Because the child is so intensely interested in his achievement in his big muscle activities, and (2) because vigorous physical activity is one of the most important factors in health and the basic source of organic development, these activities furnish the core of a normal health procedure, and offer the natural setting for the introduction of health information.*

Note: There are unquestionably other natural interests that furnish incentives for the acquisition of health information besides the desire to achieve in the big muscle activities. A strong and legitimate incentive to the practice of health habits is the innate human desire to be physically attractive. This motive has been thought to be stronger in girls than in boys, but the factor of training has bulked so large in the case of girls that it is questionable whether it is more characteristic of girls than of boys. It expresses itself in different forms in the two sexes, but both boys and girls naturally desire to be physically attractive. If intelligently appealed to, this characteristic furnishes an effective basis for the formation of health habits. Care must be exercised in the leadership of this incentive to prevent its exploitation, especially in the case of girls.

AIM OF HEALTH EDUCATION

The aim of health education is to help all our boys and girls to become as physically efficient as possible.

To do this requires that—

1. The Child

- (1) *Shall know the Important Facts concerning*
- (a) food
- (b) rest
- (c) cleanliness
- (d) sanitation
- (e) elimination
- (f) exercise
- (g) posture

The application of these facts makes normal growth possible.

- (2) *Shall have the right kind and amount of physical activities.*

This is the only fundamental source of development as distinct from growth.

- (3) *Shall develop the attitudes that cause him to apply his information in the wise direction of his conduct.*

2. The Adult

Shall offer to every child the opportunity for a physical examination by a medical expert in order that all physical handicaps may be removed.

The Child's Problem versus the Adult's Problem

The three factors, (1) information, (2) exercise, and (3) attitudes, come about as the result of the *child's* reacting upon his environment. Adult leadership is necessary to aid him in selecting the important facts, in judging the amount and kind of exercise, and above all in developing right ideals; but it is perfectly apparent that no results will accrue unless the child is an active participant in every instance.

Physical Examination

The other factor necessary for health education to function effectively is the physical examination by a competent physician. This, it should be noted, is entirely the function of the *adult*. The child cannot judge what is necessary in order that his physical handicaps shall be removed. The adult expert alone is competent.

The situation might be made clear by saying that effective instruction in health education deals with the first three factors. Before instruction can function as it should, all physical handicaps must be removed. The removal of physical handicaps is distinctly the problem of the adult medical expert.

Records of Achievement

This program suggests that three records, (1) achievement in physical activities, (2) health habits, (3) weight according to age and height, shall be kept by each child. These records should serve as a basis for the discussion of the physical condition of every child. The teacher should help the child to see the relation between his daily habits and his health. These records should help both teacher and child to see the reasons for improvement, or lack of improvement, and thus serve as a stimulus to greater effort.

The greatest value of the three records, (1) weight according to age and height, (2) achievement in physical activities, (3) health habit record, is that they are the records in which children are interested. They carry child incentives and are therefore teeming with possibilities for the development of right attitudes toward health.

A comparison of these with such records as hearing, vision, condition of tonsils, etc., brings out the contrast. These are the records of conditions in which the adult is interested, and the adult expert alone can handle them. The other records depend upon child effort and are largely under the child's control. They require leadership, to be sure, as do all child activities, but they offer the natural child approach to health as compared with the adult approach.

Hygienic conditions that should be given immediate attention by the teacher

1. Ventilation

Work should never proceed until the room is properly ventilated.

2. Seating and Sitting Posture

Every child should be seated so that the lower part of his back is resting against the back of the seat. The lower leg should form approximately a right angle to the thigh. The feet should rest flat on the floor. If a child changes his seat, the seat should be adjusted

immediately. If chairs are used, each room should be supplied with different sizes so that each child is properly seated.

3. Temperature

Every room should have a thermometer and a children's committee should be chosen to watch the thermometer every hour. Temperature should be from 65 to 68 degrees F.

4. Lighting

Light should enter from the left. Shades should be adjusted so that light does not fall upon the work of the pupils or upon their faces.

5. Clean Hands

Work should be planned so that children have time to wash their hands, especially before eating. We sometimes talk about the necessity of clean hands and then make it almost impossible to have clean hands.

Committees of children from the third grade up should take charge of the ventilation, temperature, seating and lighting. These committees should be changed quite often so that all children will have the opportunity to form the habit of attending to these vital health situations. Proper leadership by the teacher can very soon establish the attitude that the *first duty in the school room of teacher and children is to see that the hygienic conditions are attended to.*

Morning Inspection

Much discussion has centered around the question of morning inspection. Practically every one agrees that it is necessary, but very few are agreed as to the best methods to employ.

Very young children are not inclined to be sensitive about showing how clean their hands and teeth are, and the teacher has no cause for worry. As children grow older, they become more sensitive about their persons and this attitude should be respected. It is possible to establish the habit of coming to school with clean hands, clean finger nails, clean teeth, clean handkerchief, etc., during the early years, so that when older and more sensitive self-respect will enforce attention to these habits.

Many teachers approach the problem by asking if all are ready for work. If a child has clean hands, teeth brushed, feet dry and warm, a clean handkerchief, he is ready for work. These are the main essentials from the health viewpoint. Clean clothes, hair brushed, polished shoes are desirable, from the standpoint of social standards, but not necessary for health.

Some teachers in the lower grades have committees of children make the morning inspection. Others make the inspection themselves. If a child's hands are unclean, he is sent to the lavatory. When a child fails to bring a clean handkerchief, he is urged to bring it. If he fails again, sometimes teachers give him a square of gauze. Constant attention to the necessity of a clean handkerchief gradually brings even the most untidy, untrained child to come to school with a clean handkerchief.

Whenever there is the slightest indication that a child will be sensitive about any reference to his lack of personal cleanliness, the child,

even of five or six years, should be spoken to individually. In the upper grades the matter should always be an individual one.

Much can be accomplished in stimulating children along lines of cleanliness by praising those who are clean. Young children are so eager to win the approval of the teacher that they will make great effort to be as clean as those who are praised.

A word of caution in regard to the tendency that is liable to develop to demand cleanliness at the expense of vigorous outdoor activity. In our zeal to be clean, we are prone to forget that children cannot play vigorously in the open without getting their hands dirty. *The development which would result from vigorous activity today, if lost, cannot be made up tomorrow. Children must play vigorously if they are to develop, and they must be given time to remove the dirt that accumulates as a consequence.*

Checking the Individual Health Habits

The keeping of an individual habit record has two main purposes:

1. It calls the child's attention regularly to the more important factors of health;

2. It should serve as a basis for interpretation by teacher and child of the child's physical condition.

Since this record is never to be used as a basis for promotion or reward, there should be no stimulus to the child to make false statements. He keeps the record only to help him in his progress toward health.

At regular periods the teacher should interpret with the child his three records, (1) weight, (2) achievement in physical activities, and (3) his health habits.

Just how often the pupil and the teacher should interpret these records must be decided by experimentation. Discussion of results and causes should probably be held once each week.

Health Habit Records

The more important health habits have been arranged by grades and are to be checked every day. The emphasis changes somewhat as the age advances, but only the habits relating to food, sleep, rest, exercise, posture and cleanliness are stressed.

Because parents tend to become careless about regular hours of sleep and exercise as children grow older, special emphasis has been placed upon these habits in the upper grades.

Teachers should make clear to the children that these records are kept for their individual enlightenment and have no connection with rewards or punishments.

If a teacher sees that her group needs to emphasize some particular habit, she should add that habit to the list to be checked. The list as given covers the more important health habits. Experimentation will doubtless show the need for many changes.

Low First Grade

I brushed my teeth.

I drank milk or cocoa for breakfast.

High First

I brushed my teeth.
I went to the toilet before coming to school.
I drank milk or cocoa for breakfast.

Low Second

I brushed my teeth at least twice.
I had a regular bowel movement.
I washed my hands after going to the toilet.

High Second

I brushed my teeth at least twice.
I washed my hands before eating.
I drank no coffee or tea.

Low Third

I brushed my teeth at least twice.
I washed my hands before eating.
I slept eleven or twelve hours with windows open.
I came to school with a clean handkerchief.

High Third

I brushed my teeth at least twice.
I had a regular bowel movement.
I drank milk with one, two, or three meals.
I took a bath on _____ (check days).

Low Fourth

I slept eleven hours with windows open.
I played vigorously at least two hours out of doors.
I ate a green vegetable and some fruit.
I drank milk with one, two or three meals.
I drank no tea or coffee.

High Fourth

I took a bath on _____ (check days).
I had a regular bowel movement.
I played vigorously at least two hours out of doors.
I ate three regular meals.
I drank no tea or coffee.

Low Fifth

I slept eleven hours with windows open.
I played vigorously at least two hours in the open.
I ate a green vegetable and some fruit.
I took a bath on _____ (check days).

High Fifth

I ate three regular meals.
I ate sweets only after meals.
I played vigorously at least two hours in the open.
I drank milk with one, two, or three meals.
I drank no tea or coffee.

Low Sixth

I used only my own towel.
I drank at least three glasses of water.
I slept eleven hours with windows open.
I brushed my teeth at least twice.
I drank no tea or coffee.

High Sixth

I slept eleven hours with windows open.
I ate three regular meals.
I played vigorously at least two hours in the open.
I drank milk with one, two or three meals.
I ate sweets only after meals.

Low Seventh

I brushed my teeth at least twice.
I played vigorously at least two hours.
I slept at least ten hours with windows open.
I ate a green vegetable and some fruit.
I drank milk with one, two, or three meals.

High Seventh

I ate three regular meals.
I ate a green vegetable and some fruit.
I played vigorously at least two hours.
I slept ten hours with windows open.
I drank at least three glasses of water.

Low Eighth

I used an individual cup and towel.
I ate three regular meals.
I slept at least ten hours with windows open.
I played vigorously at least two hours.
I ate sweets only after meals.
I drank no tea or coffee.

High Eighth

I drank milk with one, two, or three meals (no coffee, no tea).
I slept at least ten hours with windows open.
I played vigorously at least two hours.
I brushed my teeth at least twice.
I ate a green vegetable and some fruit.
I used an individual towel.

Suggestive Form for Individual Record of Health Habits

Name..... Grade..... School.....

Date.....

I slept eleven hours with windows open	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F
I played vigorously two hours out of doors															
I ate a green vegetable and some fruit															
I drank milk with one, two and three meals															
I drank no tea or coffee															

WEIGHT RECORDS

Weighing and Measuring

The relation of weight to height and age, if the ratio of increase or decrease of weight is carefully noted, is probably the best single index of general health and nutrition as well as the best criterion for normal growth. The weighing and measuring should be done by the teacher of the class, or, in the upper grades, by the children under the supervision of the teacher. All children should be weighed and measured three times during each school year: at the beginning of the fall term, at the beginning and the end of the spring term.

If a child is found to be ten per cent below or twenty per cent above the normal weight for his age and height, the teacher should notify the nurse immediately and the child should be examined carefully.

The statement of the child's weight and the average weight for his age and height should be recorded on the report card which goes home to be signed by his parents. The importance of weighing should be discussed by teacher and pupil, both before and after the weights are taken. By proper leadership the teacher can develop the attitude that keeping the body in as perfect physical condition as possible is a moral-social obligation. The weighing helps us to know that we are keeping fit. If we are falling far below our normal weight, we should scrutinize our habits very carefully.

Teachers should exercise the greatest care in discussing the weight records with children. We should never forget that it is possible for an individual to be in perfect condition and still be ten per cent below the average for his age and height. Encourage the child to think that he can reach the average weight. Effort will bring him up to standard.

We should always remember that the important factor to stress is that the child is *gaining*. If a child is healthy, he gains weight. If

he is not gaining, he probably needs special attention and should be referred to the nurse or the physician.

"Growth is always one of the signs of health in young animals and children. This does not mean that retarded growth is always a sign of ill health. There are periods in the individual's life and certain times of the year when slower growth may be normal. For the child to be led to believe that he is ill, simply because he is growing less rapidly, is a serious mistake. This is particularly so if the health examination records show no physical defects, or underlying causes of ill health.

"The weight of the child is the best single, practical, concrete (and at least) introductory evidence of health to interest the child, the child's parents, and to serve as a definite record or index for trained workers, including the physician and the pediatrician themselves.

"The use of this universally interesting test of health in weighing children has been the most effective introductory measure in improving the health of children which has ever been found.

"Through the use of this test and the classification of children into the well-nourished and under-nourished (however inaccurate this classification may be) multitudes of delicate, under-nourished children have had their physical defects discovered and corrected and have had careful study given to home conditions, and the regime nor personal hygiene with great improvement in these influences, and the health of these children has been strikingly advanced.

"However, no single test or sign of health is wholly adequate, accurate, or satisfactory.

"Classifying the children by a weight standard or measurement alone is not scientifically or clinically an accurate method of separating those who are unhealthy or malnourished from those who are healthy and properly nourished.

"Experience shows to many that the 7 or 10 per cent line below the standard weight of children for height and age includes few children who are not undernourished, or who do not for that or some other reason deserve special attention. However, there are signs of malnutrition other than weight deficiency which are very important and which may be found in children well within the 7 or 10 per cent margin as to weight.

"* * * It should be pointed out here that the usefulness of weighing and measuring as an educational feature is undoubtedly. It arouses the interest of the child and also the child's parents. In general, it may be used to give the child a concrete, objective measure of the value of health habit observance. It offers a means by which the child may be brought to understand the cause and effect relationships between healthful living and normal growth. It gives the child a goal toward which he may work. * * * The teacher should understand the limitations of the weight record as an index to health. This will enable her in her teaching to avoid such pitfalls as over-emphasis of the importance of weight, or making the child feel that if he is of proper weight it is not important for him to observe health habits."—From the Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association.

Directions for Weighing and Measuring

Children should remove wraps, sweaters and shoes when being weighed.

They should stand in the center of the scales.

The best results in measuring are obtained by having the child stand against the wall, heels, shoulders and head touching the wall. A ruler or a tape measure should be placed against the wall. If a tape measure is used, it should be fastened to the wall or a piece of wood so that stretching is not possible. An ordinary chalk box placed perpendicular to the wall may be used to indicate the height. Pencils or rules should not be used.

The height and weight should be recorded immediately after being taken. Ability to remember until one reaches his room should never be depended on.

If a child has been absent for five days on account of illness, he should be weighed before being allowed to return to work. If this precaution is taken, the possibility of falling into the underweight group between the regular weighing periods will be practically eliminated.

The list of children found to be ten per cent underweight at the last weighing and measuring of the year should be given to the nurse so that she can give these children special care during the summer.

Physical Examination

Every child should have a thorough physical examination at least once a year. This examination should be made by a physician chosen by the parents or by a physician of the Health Department with the consent of the parents. Any physical defects should be noted and the parent urged to have these removed so that the child may be as free from all physical handicaps as possible.

The Teacher's Responsibility

The teacher should have a copy of the physician's record of the physical examination in her possession.

Teachers should realize that they are the guardians of the health of every child in their groups. Unless the teacher has the record of the physical examination, she cannot know the physical weaknesses of the child. If she has it, she should hold herself responsible for watching peculiarities of sight, hearing, posture, etc. If she has the records and is not careful to report to the nurse the child that is losing weight, that seems nervous, hard of hearing, etc., she is neglecting her duty in not reporting such children.

The Underweight Group

When children are found to be underweight, they should be given special attention. If there are sufficient school nurses, they should meet with these children and discuss their physical condition and health habits at least once a week. The children should be urged to take a mid-morning lunch and special care should be taken by both nurse and teacher to see that they do not over-do physically. They should be weighed at least every two weeks. They should go to bed earlier than others of their age.

Common sense would dictate that these children should be relieved from all nervous strain. It is most unjust to the child that is below normal physically to allow him to carry as much regular school

work as the child who is up to standard. No child should be prevented from being promoted who has satisfactorily completed his school work; but the child who is not progressing as he should physically should unquestionably be prevented from taking full work until he is thoroughly up to standard.

The school physician, the nurse and the teacher should co-operate to see that every child receives this kind of justice. The final decision should always rest with the physician.

If the nurse cannot give time to the undernourished group, some one person in the school should be appointed to look after their needs specially. This person should work with the nurse and the doctor, following their suggestions, and urging the parents to co-operate in bringing the child back to standard.

WEIGHT-HEIGHT-AGE TABLE

Prepared by Bird T. Baldwin, Ph.D., and Thomas D. Wood, M.D.
Published by the American Child Health Association

FOR GIRLS

Hgt. In.	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.	Hgt. In.			
38	33	33													38			
39	34	34													39			
40	36	36	36												40			
41	37	37	37												41			
42	39	39	39												42			
43	41	41	41	41											43			
44	42	42	42	42											44			
45	45	45	45	45	45										45			
46	47	47	47	48	48										46			
47	49	50	50	50	50	50									47			
48		52	52	52	52	53	53								48			
49		54	54	55	55	56	56								49			
50		56	56	57	58	59	61	62							50			
51			59	60	61	61	63	65							51			
52			63	64	64	64	65	67							52			
53			66	67	67	68	68	69	71						53			
54			69	70	70	71	71	73							54			
55				72	74	74	75	77	78						55			
56					76	78	78	79	81	83					56			
57						80	82	82	84	88	92				57			
58							84	86	86	88	93	96	101		58			
59								87	90	90	92	96	100	103	104	59		
60							91	95	95	97	101	105	108	109	111	60		
61								99	100	101	105	108	112	113	116	61		
62									104	105	106	109	113	115	117	118	62	
63										110	110	112	116	117	119	120	63	
64											114	115	117	119	120	122	123	64
65										118	120	121	122	123	125	126	65	
66											124	124	125	128	129	130	66	
67											128	130	131	133	133	135	67	
68												131	133	135	136	138	68	
69													135	137	138	140	69	
70													136	138	140	142	70	
71														138	140	142	144	71

FOR BOYS

Hgt. In.	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.	19 Yrs.	Hgt. In.
38	34	34														38
39	35	35														39
40	36	36														40
41	38	38	38													41
42	39	39	39	39												42
43	41	41	41	41												43
44	44	44	44	44												44
45	46	46	46	46	46											45
46	47	48	48	48	48											46
47	49	50	50	50	50	50										47
48		52	53	53	53	53										48
49		55	55	55	55	55	55									49
50		57	58	58	58	58	58	58								50
51			61	61	61	61	61	61	61							51
52			63	64	64	64	64	64	64							52
53			66	67	67	67	67	67	68	68						53
54				70	70	70	70	70	71	71	72					54
55				72	72	73	73	74	74	74						55
56				75	76	77	77	77	78	78	80					56
57					79	80	81	81	82	83	83					57
58					83	84	84	85	85	86	87					58
59					87	88	89	89	90	90	90					59
60						91	92	92	93	94	95	96				60
61							95	96	97	99	100	103	106			61
62							100	101	102	103	104	107	111	116		62
63							105	106	107	108	110	113	118	123	127	63
64								109	111	113	115	117	121	126	130	64
65								114	117	118	120	122	127	131	134	65
66									119	122	125	128	132	136	139	66
67									124	128	130	134	136	139	142	67
68										134	134	137	141	143	147	68
69										137	139	143	146	149	152	69
70										143	144	145	148	151	155	70
71										148	150	151	152	154	159	71
72											153	155	156	158	163	72
73											157	160	162	164	167	73
74											160	164	168	170	171	74

RECORDS IN PHYSICAL ACTIVITIES

Since organic development is so largely the result of vigorous physical activity, the keeping of the records of achievement in these activities is of vital importance.

The direction of physical activities must be under a trained physical educator and the development of this program requires that the teacher and physical education expert cooperate.

No outline of physical activities is presented here as the details of that program must be worked out by leaders in that field.

TESTS FOR ALL GRADES IN ORGANIC EFFICIENCY, MOTOR EFFICIENCY AND SKILL

These tests are planned to be taken with the following equipment: Gymnasium mats or soft ground with canvas cover.

Gymnasium frame containing two horizontal bars and four ropes.

Basketball equipment.

Baseball equipment.

These special tests are suggested because of the limited equipment necessary. The equipment in public schools is usually so limited that more elaborate tests are as a rule prohibitive.

As yet no standards have been developed for the first four grades. Standards for the upper grades are given in the Decathlon Scoring Charts for Elementary Schools. These charts are distributed by the Department of Physical Education, City Schools.

TESTS

Classification of Children—Age, Weight, Height (Grade).

First Grade.

ORGANIC AND MOTOR EFFICIENCY—

Running, distance? Skipping, distance?

Back—Suspension, how long?

Abdominal—Climbing, how high?

SKILL—

Forward somersault, in good form? Or head stand with body supported against wall, in good form? Or elements leading up to cartwheel, in good form?

Second Grade.

ORGANIC AND MOTOR EFFICIENCY—

Running, distance? Skipping, distance?

Back—Chinning (overhand grasp), how many times?

Abdominal—Climbing (rope), how high?

SKILL—

Head stand, in good form? Or forward roll, in good form? Or cartwheel, in good form?

Third Grade.

ORGANIC AND MOTOR EFFICIENCY—

Running, distance? Bunny hop, how many times? Or bear walk, distance? Or leap frog, how many times?

Back—Chinning, how many times?

Abdominal—Half lever with straight or flexed knees, in good form?

SKILL—

Cartwheel, how many times in good form?

Fourth Grade.

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Wheelbarrow race, distance?

Strength—Back: Balance hanging, in good form?

Abdominal: Backward somersault with ropes, how many times, in good form?

Skill—Running broad jump, distance?

Grammar Grades

Fifth Grade.

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Chinning, how many times?

Strength—Back: Balance hanging on bar, how long?

Abdominal: Jack knife, in good form?

Skill—Jump and reach (girls), how high?

Running broad jump (boys), distance?

Sixth Grade—(Boys).

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Cartwheel, how many times, in good form?

Strength—Back and Abdominal: Climbing with transfer, how high and how many transfers?

Skill—Running high jump, how high?

Sixth Grade—(Girls).

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Cartwheel, how many times, in good form?

Strength—Back and Abdominal: Climbing with transfer, how high and how many transfers?

Skill—Running high jump, how high?

Seventh Grade—(Boys).

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Obstacle race, distance and number of obstacles?

Strength—Back and Abdominal: Standing backward somersault over bar to balance hanging, in good form?

Skill—Basketball pass (Decathlon chart).

Seventh Grade—(Girls).

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Obstacle race, distance and number of obstacles?

Strength—Back and Abdominal: Knee bending from overgrasp hanging position on bar, how many times?

Skill—Basketball throw for goal (Decathlon chart).

Eighth Grade—(Boys).

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Stride spring jump from front leaning rest, how many times?

Strength—Push up (Decathlon chart). Sit up (Decathlon chart). How many times?

Chinning (overhand grasp), how many times?

Skill—Baseball batting (Decathlon chart), how many times?

Eighth Grade—(Girls).

ORGANIC AND MOTOR EFFICIENCY—

Speed—Dash, time and distance?

Endurance—Stride spring jump from front leaning rest, how many times?

Strength—Push up (Decathlon chart). Sit up (Decathlon chart). How many times?

Balance hanging on bar forward somersault, correct form?

Skill—Baseball pitching (Decathlon chart), how many?

A very urgent need exists for standards of capacity for normal children under ten years of age.

The opinion is often expressed that children under ten years of age should not be tested for organic efficiency (endurance and speed).

One wonders if this attitude is not due in large measure to the adult notion that standards are established by *subjecting* children to muscular and organic strain in competition. Children constantly test themselves out in their spontaneous physical activities, comparing their achievements with the achievements of others. This is a thoroughly normal process. Wise leadership should direct these tendencies and establish standards without any strain or consciousness on the part of the child.

Until these standards are established for children under ten years of age, the program in physical activities as outlined here cannot be carried out with entire satisfaction; but even though standards do not exist for these years, the activities can be conducted and records of individual achievement kept. Thus incentives can be developed and results obtained. The work is under the immediate direction of Department of Physical Education.

Classification of Children by Age, Weight, Height (and Grade)

The purpose of classification is to establish achievement standards for children of equal potential ability.

The classification by age, weight, height (and grade) for achievement in big muscle activities is accepted as the best method for fairness in comparison of results and judging achievement.

The factor of grade is not an important one as it relates to child achievement. It is used only as a matter of convenience for the teacher.

For convenience in handling records and in grouping children for work the exponent system as used in the California plan of Decathlon Tests is recommended. The value of this plan, which is derived from computing the results of the child's achievement in physical activities, age, height and weight, consists in the emphasis that it places on the incentives to improve in order to pass from one group to the other. This is, of course, the expression of normal competition.

KINDERGARTEN, FIRST, SECOND AND THIRD GRADES

Activities Contributing to Physical Education

1. Free activities indoors.

- (a) Construction activities (1) play with large blocks, (2) construction with wood; sawing, boring, pounding, planing, (3) blackboard and easel drawing and painting, (4) modeling with plastic materials.

2. Indoor games.

- (a) Dramatic play.
- (b) Rhythmic play.
- (c) Organized games (1) traditional or folk games, (2) original games, (3) competitive games; ball, bean bag, nine-pins, hoops, races.

3. Out-of-door activities.

- (a) Free play on apparatus; turning bars, balance beam, swing, teeter, sand pile.
- (b) Free bodily activity or play activities; running, jumping, hopping, skipping, walking, calling, shouting, singing, dancing, throwing, striking, catching, tossing, swinging, pushing, pulling, carrying, climbing.
- (c) Organized games (traditional or group) including ball games, tag games and other forms of traditional or group games.
- (d) Nature plays (1) with wind; kites, pin-wheels, racing with wind, (2) with sun: shadows, reflected light, (3) with water; wading, splashing, boats, waterwheels, dams, swimming, fishing.

(From the Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association.)

THE VALUE OF GOOD POSTURE

The maintenance of good posture while standing, sitting, moving and working makes a direct and an important contribution to HEALTH. By good posture is here meant *habitual* posture—not merely the knowledge of how to assume it and occasionally doing so. The term posture indicates the relation of the various segments of the body to one another and the relation of the body as a whole to the ground, especially in standing and moving. The latter is usually referred to as "weight bearing" or "weight transfer."

The importance of good posture is readily understood when one considers the segments of the trunk itself which contains the vital organs of the chest cavity and the abdominal cavity. The spine supports these organs as well as the shoulder girdle and the arms. It is exceedingly flexible in young children and its support depends upon the muscles of the trunk, especially those of the upper back and the abdominal wall. Vital organs must be well "housed" (not cramped) and well supported to function efficiently. This condition is assured only through the development of power of the postural muscles and the establishment of *habitual* good posture.

The establishment of this habit is the result of the following methods:

1st. The development of power of the postural muscles to keep pace with the rapidly increasing weight of the body. This is done

through big muscle activities especially: climbing, jumping, chinning and using the arms vigorously in the side horizontal and vertical direction.

2nd. By giving the child a clear understanding of the mechanics (neuro-muscular co-ordination) of assuming good posture. The important facts in good posture are: Abdominal wall *flat* (pulled up and in), chest *out* over toes, neck *back* against collar, feet pointing straight ahead; and combined with it all—*ease*—not an immovable flag pole with the head balanced on the top like the gilded ball.

3rd. By having the child clearly understand and appreciate the value of good posture and thus securing his active co-operation and conscious effort in forming the habit.

While correct posture is a valuable factor in the growth and development of the child, it also contributes to the efficiency of the adult, especially in conserving energy needlessly spent in overworking certain muscle groups instead of maintaining good posture through the co-operation of all the postural muscles. There should be no local fatigue in the normal individual from holding the body in good posture. Frequent changes throughout a day are necessary, but they can all be within the realm of *good* posture.

Correct position of the feet in moving makes it possible to transfer the weight of the body to the ground correctly. The feet should point straight ahead in order that the arches and toes may function correctly. The feet should be parallel in *standing* so as to be ready to function properly when moving. The weight of the body when correctly poised is transferred to the ground in the forward part of the ankle joint.

In order that every child may intelligently strive for improvement in posture, the Triple Posture Test (Jessie Bancroft) should be used in connection with physical education at least once a term (at present the test has been taken once a year by the Assistant Supervisors).

The Bancroft Triple Posture Test (Modified)

I. The members of the class are all asked to assume their best standing posture. The teacher should view the class in profile. Pupils unable to maintain good standing posture are grouped in a section called "D."

II. The pupils able to maintain correct standing posture are given a test in walking for three to four minutes. Those unable to maintain correct posture while the body is in motion are grouped in a section called "C."

III. The pupils who pass the walking test are now given the exercise test. The exercises used in such a test differ in the various grades according to muscular control, but they include such exercises as would determine the power of the spinal and abdominal muscles particularly, such as deep forward bending of the body with *flat* back, standing arm raising sideward upward *without hollowing* the back, etc. These exercises are determined upon for the various grades by the Physical Education Department and given as a part of a physical education lesson. The pupils unable to maintain correct posture during this test are grouped in a section called "B" and those who pass all three tests classified as "A." The reason for this classification is to stimulate pupils to improve so as to pass from one group into the next higher, etc.

STANDARDS OF ATTAINMENTS BY GRADES

The real test of health education must be the habits formed, not the knowledge acquired. Hence, in measuring results the teacher should never be content with mere knowledge records.

Standards of Attainment for the Kindergarten

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school.
9. Rests completely at the proper time.

* * *

Standards of Attainment for First Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Appreciates value of habits of correct posture.

* * *

Standards of Attainment for Second Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.

Standards of Attainment for Third Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.
17. Takes a full bath at least twice a week.
18. Covers mouth with handkerchief when sneezing or coughing.
19. Insists on attending to the ventilation of the room.
20. Comes to school so dressed that vigorous free play is unhampered. (This necessitates bloomers for girls.)

* * *

Standards of Attainment for Fourth Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.
17. Takes a full bath at least twice a week.
18. Covers mouth with handkerchief when sneezing or coughing.
19. Insists on attending to the ventilation of the room.
20. Comes to school so dressed that vigorous free play is unhampered. (This necessitates bloomers for girls.)
21. Sleeps from eleven to twelve hours.
22. Watches the temperature of the room and insists on regulating it.
23. Insists on proper lighting of room.
24. Keeps fingers and pencils out of mouth.

Standards of Attainment for Fifth Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.
17. Takes a full bath at least twice a week.
18. Covers mouth with handkerchief when sneezing or coughing.
19. Insists on attending to the ventilation of the room.
20. Comes to school so dressed that vigorous free play is unhampered. (This necessitates bloomers for girls.)
21. Sleeps from eleven to twelve hours.
22. Watches the temperature of the room and insists on regulating it.
23. Insists on proper lighting of room.
24. Keeps fingers and pencils out of mouth.
25. Stands and sits correctly and takes pride in doing so.
26. Has developed the attitude that vigorous activity is not only pleasurable but essential to efficiency.

* * *

Standards of Attainment for Sixth Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.
17. Takes a full bath at least twice a week.
18. Covers mouth with handkerchief when sneezing or coughing.
19. Insists on attending to the ventilation of the room.
20. Comes to school so dressed that vigorous free play is unhampered. (This necessitates bloomers for girls.)

21. Sleeps from eleven to twelve hours.
22. Watches the temperature of the room and insists on regulating it.
23. Insists on proper lighting of room.
24. Keeps fingers and pencils out of mouth.
25. Stands and sits correctly and takes pride in doing so.
26. Has developed the attitude that vigorous activity is not only pleasurable but essential to efficiency.
27. Knows enough about the value of the commoner foods to select properly balanced meals.
28. Thinks of eating not only as pleasurable but as a source of general efficiency.

* * *

Standards of Attainment for Seventh Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.
17. Takes a full bath at least twice a week.
18. Covers mouth with handkerchief when sneezing or coughing.
19. Insists on attending to the ventilation of the room.
20. Comes to school so dressed that vigorous free play is unhampered. (This necessitates bloomers for girls.)
21. Sleeps from eleven to twelve hours.
22. Watches the temperature of the room and insists on regulating it.
23. Insists on proper lighting of room.
24. Keeps fingers and pencils out of mouth.
25. Stands and sits correctly and takes pride in doing so.
26. Has developed the attitude that vigorous activity is not only pleasurable but essential to efficiency.
27. Knows enough about the value of the commoner foods to select properly balanced meals.
28. Thinks of eating not only as pleasurable but as a source of general efficiency.
29. Shows by conduct that he appreciates the value of sleep in relation to efficiency. (No moving picture is as important as sleep.)
30. Appreciates the importance of obeying quarantine regulations.
31. Has the right attitude toward all sources of contagion.

Standards of Attainment for Eighth Grade

1. Comes to school with clean face, hands and clothes.
2. Comes to school with clean handkerchief.
3. Drinks at least a glass of milk with every meal.
4. Drinks no tea or coffee.
5. Plays vigorously in the open at least four hours daily.
6. Does not touch food of others.
7. Has a bowel movement before coming to school.
8. Brushes his teeth before coming to school and before going to bed.
9. Rests completely at the proper time.
10. Eats at least one green vegetable daily and some fruit.
11. Insists on having windows open.
12. Insists on having a suitable chair or desk and sits in it properly.
13. Appreciates value of a breakfast of whole grain cereal.
14. Washes hands before eating and after going to toilet.
15. Uses drinking fountains properly.
16. Eats sweets only after meals.
17. Takes a full bath at least twice a week.
18. Covers mouth with handkerchief when sneezing or coughing.
19. Insists on attending to the ventilation of the room.
20. Comes to school so dressed that vigorous free play is unhampered. (This necessitates bloomers for girls.)
21. Sleeps from ten to eleven hours.
22. Watches the temperature of the room and insists on regulating it.
23. Insists on proper lighting of room.
24. Keeps fingers and pencils out of mouth.
25. Stands and sits correctly and takes pride in doing so.
26. Has developed the attitude that vigorous activity is not only pleasurable but essential to efficiency.
27. Knows enough about the value of the commoner foods to select properly balanced meals.
28. Thinks of eating not only as pleasurable but as a source of general efficiency.
29. Shows by conduct that he appreciates the value of sleep in relation to efficiency. (No moving picture is as important as sleep.)
30. Appreciates the importance of obeying quarantine regulations.
31. Has the right attitude toward all sources of contagion.
32. Shows by conduct that he is conscious of his duty of actively promoting community health.

METHOD

The organization of the child's self-impelled physical activities furnishes the natural setting for the introduction of health information. The child is eager to gain any information that will help him to achieve in these activities, hence the teacher should utilize this interest to introduce the more important facts relating to sleep, food, ventilation, etc.

The most natural time for the introduction of this information would be the period set aside for the discussion of progress as shown by the three records:

- (1) weight
- (2) physical activities
- (3) health habits.

Introduction of Information

In discussing progress as shown by the records of the child, it is perfectly natural to take up the problem of the right kinds of food for boys and girls. Young children like to talk about what they had for breakfast because eating is such a pleasurable process. Hence the teacher has the two sources of interest—interest in food because eating satisfies hunger, and interest in the kind of food that will help them to satisfy most effectively their desire to achieve in their big muscle activities. After three or four children have told what they had for breakfast, a discussion of the value of the different breakfasts is natural and interesting. Then all will be interested in deciding what really constitutes a good breakfast for a child. Quite as important as what we eat is the way we eat. If we are to be as strong and healthy as possible, if our records are to improve, we will eat slowly, chew our food carefully, rest after eating, etc.

In the first and second grades such a discussion furnishes the most natural setting for a reading lesson. After such a discussion children will enjoy developing a story about the kind of a breakfast that a boy or girl should eat. Their conclusions recorded make a valuable reading lesson; especially valuable because they are the product of their own thinking, the expression of their developing interest in a vital life activity. A more natural situation for beginning reading it would be difficult to conceive.

Making Books

Because children instinctively desire to express their ideas concretely, they take satisfaction in making books. These books might tell the story about the foods that would be more helpful; in chinning the bar, winning the race, etc. Pictures of what constitutes a wholesome breakfast or lunch drawn and colored by the child, or illustrated by bright colored advertisements of fruit, vegetables, cereals, etc., would add greatly to the attractiveness of the book and help impress more clearly the knowledge about the foods that are certain to help boys and girls to be happy and well.

The story of how the tooth brush helps the child to achieve his goals will make another interesting page or pages in his book. This gives an opportunity for talks about how to brush the teeth, how to care for the tooth brush, why we need to go to the dentist at least once a year, etc. Advertisements of beautiful teeth can be found in many magazines which will add to the vividness of the child's expression of his attitude toward the care of his teeth.

In the same way every important factor in health, fresh air, sunshine, elimination, etc., might be introduced.

Building the Modern House

The child's inherent interest in construction offers a natural situation to reinforce ideas about ventilation, sanitation, sunshine, sleep and food. He builds his house with windows so arranged that each room is full of sunshine and fresh air. The baby sleeps on the sleeping porch or at least with windows wide open. There are no double beds in the house, because every person needs an individual bed. When the milkman brings the milk bottle, mother wipes the top most carefully

before she pours out the milk. Johnny is the engineer on a train that brings only the cleanest milk. No feather duster is found in this modern establishment, but every kind of equipment is used that prevents dust from filling the air. The breakfast table presents a wholesome breakfast, a bowl of oatmeal and milk, toast and fruit. The tooth brush hangs in a dry, sunny spot. It doesn't matter much whether the table is set with paper dishes, pictures of bowls of cereal and fruit, or whether they be real fruit and real dishes. Fruit and dishes made of clay or plastecene are quite as satisfactory as real; more so, probably, if made by the children.

One would not claim that this type of work guaranteed that children would live just as ideally as they are playing they live. The dramatization is simply an opportunity to stress the importance of certain ways of living.

Suggestions on Methods of Stimulating Effort Through Concrete Records of Achievement

The ideal educational situation is the situation into which the child enters because he drives himself into the activity and asks no reward save the satisfaction which he experiences in the activity.

Human nature enjoys, however, having its effort recognized and such recognition is often a stimulation to the individual to make greater effort, and a stimulation to others to make greater effort.

The following are examples of the concrete recognition of achievements which have increased the enthusiasm of many individuals to put forth greater effort. The concrete expression acts as a constant reminder of the importance of acting in a certain manner. Many teachers have found that the concrete recognition of an established habit, such as eating candy only after meals or of giving up coffee, has developed a powerful group urge which has resulted in children's forming habits that no other appeal but the group appeal could obtain.

Teachers should aim to utilize every opportunity to check concretely progress in right health practices.

Concrete Recognition of Achievement may be expressed in many ways. Some that have proven effective are suggested below.

Coffee Charts

When a child has refrained from drinking coffee for two weeks, his name appears on a large chart at the top of which is printed: "We do not drink coffee." The mother's signature should appear on the card with the child's name. As one by one the names appear on the chart, the stimulation to do as well as others do becomes stronger and stronger.

A clever coffee chart shows a balloon ascending and below it the motto, "Drop Coffee! We've done it." The coffee is seen falling to the earth.

A large garbage can appears on another poster with many cans of coffee being dumped into it. The names of those who have dumped the coffee appear below.

The Candy Table

Children make a small table of cardboard and cardboard chairs. As rapidly as any member of a class establishes the habit of eating candy *only after meals*, he wins a place at the candy table. He is then repre-

sented by a little pasteboard figure which he makes himself and decorates as he chooses before placing it in the group.

A very original candy poster shows a large colored stick of candy with a blotter partially covering the candy. Below appears the following rhyme:

And now there's health and happiness
And we are fine and dandy.
We've done a good thing—can you guess?
We've blotted out old candy.

Names of those who eat candy only after meals follow.

The Merry-Go-Round

Children make a merry-go-round of heavy cardboard. As fast as a child gives up coffee, or establishes the habit of eating candy only after meals, the group allows him to ride on one of the cardboard horses. The merry-go-round can, of course, be used to recognize any worthwhile achievement.

Riding the Cow

A large black cow on a white background. As fast as children give up coffee and drink milk, they win the right to ride on the cow. Small pasteboard figures represent the children.

Climbing the Mountain

Picture of a steep mountain. Those who have won are on the top. Achievement can be represented by drawings on cardboard or poster proper.

The Clean Handkerchief Row

Each child makes and decorates a paper handkerchief. These are placed on the wall over their names. In case a child fails to bring a clean handkerchief, the paper handkerchief is removed and only the bare space is visible. This helps the children to remember and thus build the habit of having a clean handkerchief daily.

The Tooth Brush Chart

A chart is made with small paper pockets in which are placed small cardboard tooth brushes with the child's name. In case any one comes to school without brushing his teeth, the tooth brush is removed.

Colors—Using the Colors Red, White and Blue to Indicate Achievement

The use of the three colors to indicate the weight groups into which children fall according to age and height has proven stimulating to children to make greater effort to live properly so that all members of the class can be in the white group.

The divisions are: White group, normal and above; blue group, normal to ten per cent below; red group, ten per cent below and more.

A graph after each weighing showing the continuous records of the percentage of each group can be used by the teacher as a proof that the health is improving or that greater effort is needed so that the red group will disappear and the blue and white groups grow in size.

There are many ways of applying this color scheme. Children will show great originality in working out schemes to express their achievements.

The Doll Family

Young children may dress their dolls (paper or real) in red, white or blue dresses according as their weight indicates their grouping. As rapidly as they win a place in the blue or white group they may show their achievement by changing the color of the doll's dress.

Red, White and Blue Balloons

Colored balloons may be used to show groupings.

Red, white and blue fish may represent the same idea.

Using different colored birds has proven effective. The white birds are strongest and fly home (to the bird house) with ease; the blue birds are about half-way home, and the red birds have a long way to go.

Recognition of achievement is often signified by the use of gold or silver stars. It is, of course, obvious that recognition of achievement and the giving of prizes are very different. In all forms of human endeavor achievement is recognized. The individual does not make the effort in order to win, but because he is experiencing satisfaction in the activity; because the activity leads on toward his goals. Humanity justly recognizes worth-while human achievement and frowns on that which is worthless.

The same situation holds in childhood. Effort or achievement in the right direction should be encouraged by recognition.

The mid-morning lunch of milk and bread that is served in the kindergarten offers the ideal opportunity for the development of important habits other than milk drinking:

1. Washing hands before eating.
2. Never touching another person's food.
3. Never eating food that has fallen on the floor.
4. Eating the food slowly.
5. Saying pleasant things to companions while eating.

Because the kindergarten teacher has such intimate contact with her children, she has frequent opportunity to teach them to wash their hands after using the toilet.

The habit of privacy should also be developed in the kindergarten.

SUGGESTIONS ON METHODS IN THE UPPER GRAMMAR GRADES

The concrete representation of achievement appeals in the upper grades as well as in the lower. Whenever a group makes marked improvement in any health habit, it is well to encourage them to recognize it in chart or poster form.

Boys and girls in the upper grammar grades are beginning to be interested in civic affairs and they will investigate with keen interest conditions in their city that affect their opportunities for proper play activities, pure water, pure milk, clean food, protection from contagious diseases, disposal of waste, etc. Therefore, this is the time to emphasize their relation to the community life of which they are a part and in which they will soon be directing factors.

Visits should be made to meat shops, candy factories, ice cream factories, bakeries, dairies, etc., so that children may see at first hand how sanitary laws are observed. If the children in all grammar grades

made such visits often enough, the necessity for law enforcement would be surprisingly diminished. If we are intelligent, we do not patronize insanitary institutions.

A Visit to a Factory

Before going to a factory, children should discuss the various conditions that are to be looked for that would most affect health; ventilation, lighting, heating, rest rooms, lunch rooms, individual drinking cups and towels, play space and the leaders of the play activities of children of working mothers employed in the factory, play space and equipment for employees, sanitary lavatories, protection from dangerous machinery, attendant physician and nurse. For visits by the children, well-conducted factories should be selected, rather than those in which sanitary and hygienic regulations are violated.

Valuable oral and written discussions grow naturally out of such visits. Examples would be:

1. Do you consider it wise for the owner of a factory to provide for the physical care of the workers?
2. How might the health of the city be affected by unhealthful conditions in a factory?
3. Do you think the owner of a factory has a right to allow people to work under insanitary conditions?
4. Do you think it would be profitable for a factory to provide healthful surroundings even though it was expensive to maintain them?
5. What would you do to get factory owners to make working conditions safe and sanitary?
6. What suggestions would you offer to the owner of a factory that you feel would help him to improve conditions?

Careful observation should be made of how food is handled, cleanliness of the people handling it, protection from flies and dust, etc.

Following are examples of some of the valuable discussions that would naturally arise after a visit to a butcher shop, ice cream factory, bakery shop or grocery store:

1. What advantages in buying bread from a bakery where the bread is never touched by hands while being made?
2. Could an insanitary bakery shop cause trouble for a whole city?
3. Do you prefer to buy bread wrapped in oiled paper?
4. Who should control the employment of butchers?
5. How can you help to make the butcher, the baker and grocery man keep their shops clean?
6. Is it our duty to buy from clean stores?
7. Is it our duty to report unclean shops to the health officer?

The Making of Health Posters

Children take great satisfaction in making posters. Probably no one form of expressing attitudes toward health has been more emphasized than the making of health posters. In expressing our ideas by means of pencil or crayon we probably intensify them, and if cleverly expressed, they become the means of focusing the attention of others on the idea. Thus health posters have a value for the one who makes the poster and the one who sees it. Just how much stimulation to live more

wisely comes from a clever health poster no one is able to say, but even the most skeptical will admit that visual education has value.

That the power of a poster to stimulate does not continue over a very long period seems quite as certain. Therefore for posters to have their greatest value, it is necessary to change them often.

The Poster as an Expression of Individual or Group Achievement

When a child has developed some capacity or skill through effort, he often enjoys expressing his achievement by means of a poster. The same is true of a group. Having as a group become milk drinkers, instead of coffee drinkers, or having as a group succeeded in eliminating all the underweights, group pride should be encouraged to express itself in poster form. Other groups are prone to be stirred toward greater efforts by visual representation of success. Thus the development of a general aim in the school to be one hundred per cent physically fit may be greatly increased by use of the poster.

An Effective Health Poster

The following rules of health should be kept on the school room wall. These rules placed beneath the *Government Poster, "Health, Strength and Joy to All the Children of America," form a very artistic and educative poster.

*This poster can be obtained free from the Government Printing Office, Washington, D. C., in lots of fifty.

How to Be Happy and Well

Take a full bath at least twice a week.

Sleep long hours with open windows.

Brush the teeth at least twice every day.

Take time for a bowel movement every day.

Eat green vegetables and fruit every day.

Drink at least four glasses of water daily.

Drink a glass of milk at each meal, but no coffee or tea.

Eat sweets after meals, never between meals.

Keep fingers and pencils out of mouth.

Play vigorously in the open at least two hours daily.

CORRELATION

Many writers on health education are suggesting that an effective program in health education can be developed by correlating the different school subjects. This must mean that different subjects now in the curriculum contain the informational content necessary for the development of a health program.

The necessary informational content can be found scattered through the various school subjects, and it is possible to pour health information into children just as we have poured other kinds of information, regardless of any consciousness of need for information.

This has been the dominant method of all past school procedure and is the most fundamental reason for every failure of information to affect conduct. Therefore it seems imperative if we are to have a health program in our schools that will bring results—healthy boys and

girls—we must not accept a procedure of information cramming, a procedure that all thinking people are condemning. We must organize the purposeful activities of child life that require health information for their successful conduct. This organization furnishes the only normal correlation.

If we depend upon teachers' stressing health information as it is now distributed in different subjects, we are doomed to mediocre results.

Health education to be effective must come as all education must come, through the normal effort of individuals striving to achieve real purposes. This means that the purposeful activities of children must be organized. Information is then sought because needed to accomplish real purposes. This organization offers the only normal correlation. This is the only organization that can be effective. The organization offered here is a step toward the accomplishment of this ideal.

Dramatization

Children dramatize spontaneously. Every life activity that has a definite appeal they tend to express in dramatic form. Hence the use of dramatic plays having a health content is undoubtedly an effective way to drive home the importance of health practices. No one would claim that because children took part in health plays they would necessarily live according to the rules of health. This would be as absurd as thinking that because in their scrap books they pasted pictures of healthy babies sleeping out of doors, they would unquestionably sleep out of doors. The most that can be said for information which is presented under appealing conditions, is that it has a very good chance to affect conduct, a far better chance than information acquired under annoying conditions. Hence from the kindergarten through all the grades children should be given an opportunity to produce health plays. If encouraged, they often develop original plays of real merit.

The Value of Stories in Creating Attitudes

Though the definite value of stories in creating attitudes has never been established, there seems to be unanimous agreement that they are real aids. Because the teacher of young children uses the story so much, she has an opportunity to tell stories that develop right attitudes toward health. Health stories are quite as interesting and certainly as valuable as fairy stories.

The use of rhymes and jingles has been quite extensively used in all the grades. They seem to have much the same value as the making of health scrap books. They probably assist in portraying ideas more vividly.

Health Clubs

Many writers on methods of developing health habits have suggested the organization of Health Clubs among the children. If our conception of the organization and leadership of the natural child activities is sound, we must question the suggestion. It seems natural for children to organize tennis clubs, baseball clubs, etc., but health clubs are not normal child activities. Children will spontaneously organize their tennis clubs and will welcome adult suggestions, adult information about health that will aid them in attaining their goals—

skill in tennis playing. Health comes as a by-product in attaining their goals—but health clubs for normal boys and girls is a good example of the adult goal superimposed upon children.

The Incidental Method of Teaching Health

It is often claimed that the incidental method is most effective in teaching health because the incidental method takes advantage of concrete situations such as toothache, colds, headache, etc., to impress upon the child the importance of good health habits if he is to be free from such disagreeable experiences in the future.

There is undoubtedly value in using disagreeable experiences to prevent the repetition of certain acts. We do learn through disagreeable experiences, even though we learn most often what not to do.

This is, however, a negative conception of method.

The incidental method waits for a disagreeable experience (such as stomach ache) to occur and uses it as a stimulus to prevent the repetition of actions that caused the disagreeable situation.

The purposeful method, on the other hand, waits not for disagreeable experiences to stimulate desirable acts or responses. It organizes the purposeful activities of child life, the satisfaction of which demands right response. The purposeful method conceives of the normal child as filled with purposes, the realization of which brings right responses. The boy must sleep and eat properly if he wins the game.

The purposeful method is the only fundamentally sound method. It is also the only economical method.

The incidental method in education has value because it takes advantage of concrete situations to drive home the necessity of different ways of acting. Used in connection with the purposeful method it is very effective.

Following is a list of concrete situations that occur often and may be effectively used to stimulate better health habits:

1. Return of child to school after illness.
2. Epidemic of communicable diseases.
3. Toothache.
Loss of tooth.
Appearance of new teeth.
4. Earache.
Sore throat.
5. Rapid heart beat after exercise.
6. Sleepiness (caused by irregular hours or poorly ventilated room).
7. Dizziness (caused by constipation).
8. Nausea.
9. Visit of nurse.
10. Cuts.
11. Bites from mosquitoes, dogs.
12. School lunch.
Washing hands before eating.
Properly balanced lunches.
13. Weighing.
14. Something in the eye.

Taking Advantage of Opportunity for Practice

Because so many of the more important health habits relating to eating, sleeping, bathing, elimination and exercise have been developed and are largely practiced in the home, the school is greatly handicapped in finding opportunities for the development of right practices.

Hence it is important that the teacher take advantage of every opportunity that offers a chance for the child to do, rather than simply talk about what he should do.

Debating

The educational value of debating is unquestioned. In the upper grades debating should be emphasized. Students should be given great freedom in selecting subjects for debate. In the normal health program debates should develop directly out of the life experiences of the children.

The visit to a factory, the lack of proper facilities for vigorous activity, the failure of individuals to observe quarantine regulations are typical examples of subjects in which children are intensely interested and which offer fruitful situations for argument.

Below are given a few suggestive subjects for students of the sixth, seventh and eighth grades.

Suggestive Subjects for Debate

1. Resolved that good health is a better asset to an adult than money and influence.
2. Resolved that a child born physically weak, but properly cared for, makes a stronger adult than one born strong but not properly cared for.
3. Resolved that the inspection of physical health of employees tends toward efficiency of the plant.
4. Resolved that the boy who uses tobacco or liquor lessens his chances for success in business.
5. Does the boy or girl of the Indian Tribe have as good a chance for health as the boy or girl of San Francisco?
6. Which is the better exercise, baseball or basket ball?
7. Is it as important for boys and girls to know the laws of health now as it was one hundred years ago?
8. Do the advantages of moving pictures to our boys and girls outweigh the disadvantages?
9. Is it as important for girls to be healthy as it is for boys?
10. Has the progress in the fight against germs kept pace with the progress in electricity?
11. Resolved that organized play at recess is more beneficial than recess activity as now conducted.
12. Resolved that a boy living in the country has more chance for a long life than a boy living in the city.
13. Resolved that stores providing for recreation of their employes have greater financial returns than those that do not.
14. Resolved that the climatic conditions of San Francisco are more conducive to health than are conditions found in other cities.
15. Resolved that hospitals should be built in the country.

16. Resolved that swimming is the most beneficial exercise in which a boy or girl can indulge.
17. Resolved that athletics are as important for girls as for boys.
18. Resolved that no stores should be allowed to sell candy within three blocks of any school building.

Writing for a Purpose

The two compositions that follow were written by children of approximately the same age. They illustrate forcibly the difference in results when children tell of interesting experiences and when they simply write. Note how effectively the girl tells the story of the visit to the bakery and how labored is the style of the other child. The first girl, relating a real experience, feels she has a message of value to set forth; in short, writes because a real purpose drives her. The other child is plainly writing a "*Composition on Health*," the only reason for writing it being the "need to write a composition."

The Happy Class

Once upon a time there was a school in the country. The teacher had twenty-one pupils. She tried to make them happy and healthy.

She had the milkman bring some milk for her class. She paid for those who could not afford it.

Every two hours the children had recess for two hours. Only one boy drank coffee. The rest drank milk. No one was under weight.

One day this boy did not come to school. For several months he did not come. It was because he drank too much coffee.

After that he never drank coffee, and all was a happy class once more.

The Cookie Factory

"May we see through your factory?" asked the timid voice of one of my friends.

"See through the factory! Why what do you mean?" inquired the young woman.

"Well, you see we are studying sanitation in our class room and we wish, if possible, to inspect your factory." The lady smiled and said: "Just a moment and I will see if it is possible."

She left us and walked down the hall to a room marked "Office."

Now let us inspect our station. We are standing at the counter of the cookie factory. Our eyes sparkle at the bright array of colored cookies that lay exposed to the air and dust on the counter. Is the place clean? Extremely so, as far as we can see. But—we are not seeing far.

The young girl has returned and she smilingly turns us over to a man saying, "This man will show you through." She nods and we walk down the hall with the man—and such a man! Is he a worker here? He's too dirty to work in a cookie factory; you are wrong—that is chocolate on his hands. I look more closely. It isn't chocolate, it looks like dirt that has been collecting for many days. However, let us not argue this question any longer as we are at the end of the hall.

"Up this way," directs the man. And he slowly advances up the stairs. My friends follow but I am really afraid to walk up those rickety, old stairs. "Oh well" I told myself, "We all have to die some time," and with this I went up the stairs that creaked at every step. When I reached the top I hurried down the hall that was filled with boxes of

cookies. The windows are open and soot and dust are blowing in on the cakes.

The man is leading us into a room where several girls are eating their lunch. Boxes serve as their tables and boxes as their chairs. There are pans and pans of cookies laid one on top of another. But they lay uncovered. Our guide explains the way they make their cookies and I ask if it is right the way the cookies lay exposed. He answers that he supposes it is all right. He then blows his nose loudly (an unsanitary thing to do in a cookie factory), shoves a fly off a creamy cookie, then walks out of the room.

We are left to inspect the Cookie Palace. The women are without aprons or caps, which are necessary from the sanitary point of view. The girls have finished their lunch, they are now mixing dough with their greasy hands which they neglected to wash. The sugar barrel is an unpleasing sight, there are particles of dirt among the sugar and it is used unsifted. My impression is that it is a very dirty place and that there is very little to see.

We are finished seeing the room with the cookies and the greasy machinery. We walk down the stairs and go up to the office to thank the President for his courtesy, if not his cleanliness. The President comes out and talks to my companions, but I sneak away, a tired, hot, weary explorer. I go out into the fresh air, I jerk at my sweater, toss my head and say to myself, "A disgusting place."

HEALTH ATTAINMENTS

Before leaving the elementary school every pupil should know how to live in order to be physically efficient, and should have the attitude of mind toward health which drives him constantly to live according to his knowledge.

We must not be content until we have attained the following standards:

All children well nourished.

All children free from remediable physical defects.

Personal habits of cleanliness established.

Teeth clean and properly cared for.

Habit of a regular daily bowel movement.

Daily habit of playing vigorously in the open.

Habit of sleeping the right number of hours.

Practical knowledge of diet.

An active sense of responsibility for community health.

A clear understanding of correct posture and how to maintain it.

INFORMATIONAL CONTENT BY GRADES

Health Information for Children of the Kindergarten, First, Second and Third Grades

While it has been thought necessary to organize the more important health information that should help children to become physically fit, it is very important for teachers to realize that this information must be introduced when it is most needed by the child. Dictation as to when to introduce it or how to introduce it would probably subvert the real purpose of the instruction as it might transform a purposeful situation into a relatively purposeless situation.

Therefore, the teacher must feel free to introduce the information when she feels that it will have the greatest amount of meaning to the child and in the way that she feels will be most effective. The following ideas as to method are therefore to be considered purely as suggestions, otherwise they may become more of a handicap than a help.

Children of these grades should know the simple facts about food, water, sunshine, sleep, exercise, ventilation, cleanliness, elimination, posture and clothing, as these affect health.

Facts About Food

Children should drink milk with every meal (at least a pint and a half a day).

Children do not drink coffee, tea or wine.

Children should know what constitutes a simple, wholesome breakfast, dinner and lunch.

A well-cooked whole grain cereal with milk for breakfast should be encouraged.

Children should know the importance of

Eating slowly.

Chewing food thoroughly.

Rest before and after eating.

Being happy while eating.

Eating vegetables (especially green, leafy).

Eating fruit every day.

Necessity of a variety of foods.

Facts About Ventilation

Fresh air is necessary to health.

Impossible to have too much.

Play in the fresh air.

Air should be free from dust.

The skin needs air and sunshine.

Keep windows open at bottom and top.

Thermometer should register between 65 and 68 degrees F.

Facts About Sleep

Sleep with windows open or on sleeping porches.

Sleep in individual beds.

Sleep in loose night clothes.

Have regular hours of sleep.

Hours of Sleep for Different Ages

Years	Hours
5 to 6.....	13
6 to 8.....	12
8 to 10.....	11½
10 to 12.....	11
12 to 14.....	10½
14 to 16.....	10

Facts About Clothing

Wraps off indoors.
Wraps off when exercising.
Rubbers off indoors.
Feet warm and dry.
Change of underwear at least once a week.
Wear entirely different clothing during the night and day.
Wear only clothes that do not hamper freedom.
Bloomers keep us warm and free.

Facts About Exercise

Exercise necessary for health.
No time more important than play time.
“Standing around” is not exercise.
Play vigorously out-of-doors at least 3 hours each day.
Spend every minute possible out-of-doors.
Do not exercise vigorously immediately after meals.
Girls should be as active and skilful as boys.

Forms of Activity that Give Development

1. Climbing.
2. Tag games.
3. Races (running).
4. Bar work.
5. Mat work.
6. Stunts: wheelbarrow, cartwheel, forward somersault.
7. Swimming.
8. Vigorous natural rhythms.

Facts About Elimination

Importance of a regular daily bowel movement (inside cleanliness).
Comparison of body and stove.
Common causes of poor elimination.
Diet with little bulk.
Lack of exercise.
Lack of regularity.
Diet with insufficient quantity of water.
Proper diet, plenty of water and vigorous exercise will generally secure proper elimination. The habit of taking cathartics or salts is very bad.

Facts About Water

Necessity of water, especially between meals.
Children need about four glasses a day.
Drink water only from sources known to be pure.
Drink water between meals.

Facts About Sunshine

Sunshine helps plants and children to grow.
Sunshine must enter every room, especially *bathrooms* and *toilets*.
The more sunshine in our homes, the healthier and happier we shall be.
Play in the sunshine.
Keep window shades up.

Facts About Cleanliness

- Take at least two baths a week.
- Clean hands, faces, teeth, finger-nails, hair, clothes.
- Clean handkerchief.
- Turn the head and cover face with handkerchief when coughing or sneezing.
- Never spit on sidewalk or floor.
- Fingers, pencils, etc., away from mouth.
- Individual drinking cups.
- Individual towels and face cloths.
- Do not touch food of others.
- Wash hands after going to toilet.
- Brush the teeth at least twice each day (always before going to bed).
- Proper care of tooth brush (sunny, dry, individual receptacle).
- Visit the dentist at least once a year.
- Proper use of drinking fountain.

Safety First

The following are the more important habits to develop in relation to Safety First:

1. Knows his name, telephone number and address.
2. Crosses the street only at street crossings.
3. Looks in both directions before crossing.
4. Looks both ways in getting off a car.
5. Does not play in the street.
6. Does not play with matches.
7. Does not touch fallen wires or cables.
8. Does not fly kites near wires.
9. Does not put head or arm out of windows of moving vehicles.
10. Does not get into automobiles with strangers.
11. Does not take medicine unless given by an adult.
12. Stops, looks and listens before running out into the street.
13. Runs out into the street only to avoid obstructions or to recover possessions.
14. Does not skate in the streets. When on skates, stops, looks and listens at street crossings.
15. Does not climb telegraph poles.

First Aid

1. In case of a bad accident send for a doctor immediately.
2. Never rub the eye in case foreign matter gets into it. If particle can be seen on eyeball, it may often be removed by gentle irrigation of boric acid solution (4 per cent or a teaspoonful of powdered boric acid in a half pint of water) or of water boiled for ten minutes and then allowed to become cool. The particle may be removed by means of sterilized cotton. Towels and handkerchiefs should not be used. The sterilized cotton should be used by means of a wooden applicator. If this is not effective, a physician should be called.
3. Never probe into the ear with instruments; send for a doctor.
4. When anything lodges in the throat, unless it can be seen it is best to send for a doctor.

5. Keep dirt out of cuts or wounds.
6. It is wise to let ordinary wounds bleed to avoid infection.
7. In very serious wounds the bleeding must be stopped immediately.
8. In case blood spurts from a wound firm pressure must be placed over the artery between the wound and the heart.
9. If clothing catches fire, smother the flame by wrapping a coat or blanket around the person immediately. If no covering is near, lie down and roll over and over until the flame is smothered.
10. If a poison has been swallowed, get it out of the body by forcing the finger down the throat or by taking three or four glasses of warm water or an emetic. A teaspoonful of mustard or salt for each glass of lukewarm water, taken in quantity, acts as an emetic.
11. Every child should be taught how to resuscitate a drowning person.

VENTILATION

Fourth Grade

The principles of ventilation should be developed by very simple experiments. Light joss sticks and experiment with windows open at the bottom and top. Decide by following the smoke which combinations carry fresh air to all parts of the room.

If the school has a special ventilating system installed, close all windows and find out by lighted joss sticks if the system is carrying air to all parts of the room.

The following experiments with bacteria are recommended.

Expose for five minutes some petri dishes containing nutrient agar:

1. Out-of-doors.
2. In the crowded hallway while class is passing.
3. In the school-room.

Watch the development for a week.

4. Experiment with the effects of sunlight upon bacteria.

These experiments should furnish a basis for discussion of the problem of ventilation and should provide a very real motive for careful attention to the ventilation of the room.

Children should study the ventilation system in their own homes and in the school. By comparison they should decide what advantages or disadvantages one system has over another.

Children should know that good air is:

1. Moving, not stagnant.
2. Free from dust.
3. Between 65 degrees and 68 degrees F. in temperature.
4. Free from unpleasant odors.
5. Not too dry.

Main reasons for discomfort in poorly ventilated rooms:

1. Heat radiating from bodies causes temperature to rise.
2. Too much moisture prevents evaporation.
3. When air is in motion it aids evaporation.

Problems for Discussion

If children can discuss the following problems intelligently, they know all that is necessary to act wisely in relation to ventilation:

1. When the air is warmer inside than out, what happens if you open windows at the top and bottom?

2. What value have window plates or boards placed at the bottom of windows?
3. Why does the temperature in your school room rise when no heat comes from stove or furnace?
4. Would the air immediately surrounding your body be warmer than the air at some distance?
5. Why are we cooler when a current of air strikes our body from an electric fan?
6. Why are we more uncomfortable on a hot moist day than on a hot dry day?
7. The human body gives off moisture as well as heat. Would this affect the comfort of your school room?
8. Why are people who live in overheated rooms so subject to colds?
9. Which trades are dangerous because of the kind of air breathed?
10. Why does bad air make one feel drowsy?
11. Why is the night air often more pure than the day air?
12. How is your school room cleaned?
13. Would you use a feather duster? Why? What kind of dust cloth would you recommend?
14. Discuss the advantages of the vacuum cleaner.
15. It is claimed that men who live in extremely isolated places have no colds until they return to civilization. How would you explain this?
16. Do you think the air in a moving picture show is as bad as the air at a circus?
17. Do you think the air in your school room is as bad as the air in the movies?
18. Do you feel that the problem of ventilation is sufficiently important to warrant the appointment of a special committee to attend to it? If so, formulate the duties of that committee.
Good discussions of ventilation are found in Winslow, Healthy Living—Book 2. Wood-Hutchison, A Handbook of Health; Van Buskirk and Smith, The Science of Every Day Life; Hunter and Whitman, Civic Science in the Home.

THE RELATION OF TEETH TO HEALTH

Structure of the Teeth

Study the structure of the tooth, noting enamel, dentine, nerves and blood vessels. This study should help one to be wise in caring for the teeth.

Causes of Decay

Food, especially the starchy kinds, left between the teeth decays and the chemicals produced by microbes act on the enamel and destroy it. The dentine underneath the enamel is then attacked and in time the decay reaches the nerves.

Effects of Decay

Toothache and unpleasant breath are very common results of decayed teeth. Microbes may get into the circulation from decayed teeth and start other diseases in different parts of the body.

CARE OF THE TEETH

The natural protection of the teeth, the enamel, is very brittle. One should be very careful not to crack nuts or do anything to injure the enamel.

Chewing of rather hard foods, like crusts of bread or fibrous foods like celery, cabbage or oranges, helps to remove materials that become deposited on the teeth.

The toothbrush should be used after each meal. A good tooth powder or paste should be used once a day. An up and down movement of the brush should be used because this forces the bristles of the brush between the teeth. Dental floss passed between the teeth will remove particles of food that a brush may not reach.

Visit a good dentist at least twice a year. He will clean the teeth and discover any beginnings of decay. The baby or deciduous teeth should be as well cared for and as carefully filled as any others, for the health of the child and his ability to masticate his food depend on this, as well as do the health and orderly arrangement of the permanent teeth. This is the surest way to prevent toothache and to preserve one's teeth.

Clean, well-shaped teeth are a very valuable asset in any of life's occupations, especially those where the person is in daily contact with the public.

A well-dressed person with badly decayed or missing teeth finds greater difficulty in obtaining and holding positions, unless they be menial, than one whose outward appearance is not so natty but whose general health, largely indicated by the condition and care of the face and the teeth is judged to be very good.

Many persons are rejected when seeking positions merely because they have malformed or decayed teeth. One should use every effort from early childhood to prevent dental disorders.

CARE OF THE EYES

When reading or writing, the light should come from the left side and from above. This helps to prevent the interference of shadows from the active right hand.

Work should be held about twelve inches from the eyes.

Reading on trains is often very trying to the eyes because of unsteady light and shifting objects.

Reading while lying down is a great strain on the eyes.

Too bright a light may be just as harmful as a too dim light.

We should never read with lamplight or sunlight glaring into the eyes or reflected directly from paper.

Shades should be watched most carefully and children urged to change their seats if the light is not satisfactory.

Teachers should encourage children to have their eyes examined every year by a reputable oculist.

Common or roller towels should never be used as they readily carry eye infections and communicable diseases. Every one in the home should have his own towel, handkerchief and pillow case. In public he should use only an individual or paper towel.

Squint or cross eyes should receive immediate attention in order that the vision of the turning eye may be conserved.

A child suffering with any of the contagious diseases of childhood should have his eyes protected from the bright light, and be restrained from reading and close work. Eyes and eyelids should be kept clean.

Poultices of tea leaves and numerous other household remedies should never be used on the eyes. Boiled water and boric acid solution are the only cleansing agents safe for general use.

Foreign bodies on the cornea and injuries to the eye require the immediate attention of an oculist.

CARE OF THE FEET

We should be sure that our shoes do not cramp our feet. Our upright position places great strain on our feet. Unless our shoes fit well, the many muscles which hold the twenty-six bones of the foot in place cannot receive proper exercise and therefor the arches tend to give way. A shoe should be as wide as the sole of the foot and wide enough in front that the toes are not cramped. It should be slightly longer than the foot. The shoe should also be flexible so the foot may be freely bent. The heel should fit closely.

A comparison of an impression of the natural foot with the outline of some of the shoes on the market will help children to see why many shoes are very unhygienic. (Discussion—Winslow, Healthy Living, P. 35.)

CARE OF THE EARS

Digging in the ear with a pointed instrument is liable to injure the delicate drum of the ear.

In case of rumbling in the ears or discharge from the ears a physician should be consulted immediately.

When blowing the nose, a loosely held handkerchief should be pressed against one side of the nose. Do not blow both nostrils at the same time.

At this age children should have enough information about the structure of the ear to cause them to avoid probing into the ear. In cleansing the ears only water, soap and a soft cloth should be used.

In case of severe earache a physician should be consulted.

METHODS OF WORK

Children enjoy drawing pictures of their teeth, showing the various parts: the enamel, dentine, nerves, blood vessels, root and crown.

The careful study connected with the drawing should help them to appreciate why we should give our teeth great care.

There is much advertising material about the teeth that is attractive and sound and can be procured by writing to the companies producing it.

We should not be content until we have developed a keen sense of duty in regard to the care of the teeth.

Information about the teeth can be of value to the child only as it tends to help him to care for his teeth and develops in him the desire to care for them.

The habit of going to the dentist at least twice a year should be one of the important results of discussion about the teeth.

A Child's Book of the Teeth by Ferguson, published by the World Book Company, is very appealing to children and should stimulate them to care for their teeth.

Valuable material may be obtained by application to the American Dental Association, 5 N. Wabash Ave., Chicago.

EXERCISE AND HEALTH **Fifth Grade**

The study of the relation of exercise to health should result in giving to every boy and girl:

1. Intelligent respect for exercise because of a clear understanding of the necessity of exercise for development and health.
2. A conception of the relative values of different forms of physical activity.
3. Such an understanding of the values of exercise that they will intelligently utilize it throughout life.

In order that the right attitude toward exercise may be developed, boys and girls should—

1. Engage in muscular activity that is enjoyable.
2. Understand how the activity helps to bring health and development.

To meet the last standard requires a study of the following points:

1. The effects of exercise on
 - a. circulation.
 - b. respiration.
 - c. heat regulation.
 - d. digestion.

Muscles at Work

When muscles are active, as they are in vigorous activity, they demand larger supplies of food and oxygen than when they are inactive. This makes the heart work faster and we say our circulation is improved. The blood rushes faster to the used muscles. But the faster fuel is consumed the faster waste matter is formed. Hence the skin, the lungs and the kidneys must do more work in order that waste products be removed. Hence the whole organism is more active.

The only means of developing any organ is by exercising that organ. Therefore the more work our organs have to do, within the limits of fatigue, the more they will be developed.

Hence, when we play vigorously, we are not only developing our muscles but we are stimulating nearly every part of our bodies to more vigorous and healthful action.

Fatigue—Exercise and Waste Materials

Fatigue comes as a result of waste materials accumulating in the blood faster than the skin, lungs and kidneys can get rid of them.

While exercise up to a point of fatigue is stimulating and developmental, when continued too long it is harmful. Fatigue is nature's danger signal.

Importance of Gradual Development

Exercise should be increased gradually. This prevents the soreness and "staleness" that comes from overdoing.

Experiments

Before taking up the discussion of the following problems, have boys and girls experiment by counting the number of breaths taken per minute while sitting quietly. Exercise vigorously and then count the number of breaths.

Count the number of heart beats before and after exercising vigorously.

The following problems have been framed to help boys and girls see clearly the real value of exercise in producing and maintaining health.

Experience has proved that interest in these problems is very great when they are discussed in connection with the daily activities of boys and girls.

The discussion of these problems should be looped up regularly with the records of achievement in physical activities and in health habits.

Boys and girls should understand the difference between growth and development. When the dependence upon proper exercise is thoroughly understood, the attitude toward the place of exercise in life changes decisively. *Instead of thinking of playtime as a time to alleviate the ills that have resulted from a sit-in-the-desk, indoor program, we must realize that organic development comes largely as a result of vigorous physical activity.*

Problems to Think About

1. Why do we perspire more freely when we exercise? What relation has increased perspiration to health?
2. Why are we hungry when we exercise vigorously?
3. Why do we breathe faster when we exercise? Exactly what relation has this result to health?
4. Which do you think is the more important result of exercise—strong muscles or improved circulation and digestion? What relation has the latter to the former?
5. What would happen to your arm if you bound it in such manner that it could not be used?
6. If a baby were strapped to a board in such manner that it could not move its body, but was given proper food and care otherwise, would it grow? Would it develop?
7. If you wish to develop any part of your body, what must you do?
8. Do you think the natural tendency of children to play vigorously is a wise provision of nature?
9. Give every reason that you can think of for vigorous play.
10. What relation has exercise to the distribution of blood between the surface and the inner parts of the body?
11. Give the reason for rest immediately after eating. Why would you refrain from studying directly after a meal?
12. If you had a family of children and were selecting a city to live in, would you choose one with many playgrounds? Exactly why?
13. Show exactly how exercise or vigorous activity may improve the appetite; help the body to eliminate waste materials.
14. Do you think it is an important part of a boy's or girl's education to know the relation exercise bears to health?

15. Where does the heat of the body come from? Why are you warmer when you exercise?
16. Why are we more comfortable on a dry hot day than on a moist hot day?
17. Why do we say that a healthy person has good circulation?
18. Why do old people generally feel cold more than young people?
19. Why does the boy or girl who plays vigorously out-of-doors every day seldom complain of the "hot sun" or "cold wind?"
20. Why do your muscles feel sore if you take a long bicycle ride when unaccustomed to riding?
21. What does the trainer mean when he says his team has become "stale?"

Discuss the relative values for health and development of the following activities:

1. Walking	9. Basketball
2. Running	10. Football
3. Folk dancing	11. Baseball
4. Social dancing	12. Hockey
5. Swimming	13. Skating
6. Tennis	14. Marbles
7. Rowing	15. Mat work
8. Handball	16. Bar work

Standards for judging the effects of instruction in relation to exercise:

1. Increase in time spent in outdoor activity.
2. Improvement in choice of activities.
3. Increase in respect for exercise or play as a necessary activity of life.
4. Improvement in attitude toward clothes that hamper activity.
5. Improvement in strength, skill and endurance.
6. Improvement in general health.
7. Decrease in days absent because of illness.

Rest

Every part of our body needs rest as well as exercise. During waking hours fatigue poisons are produced more rapidly than they can be eliminated and we become tired and often sleepy. While we rest the processes of restoring and upbuilding are going on. The waste products that accumulate too rapidly to be carried off by the blood and lymph during the active hours are removed. Both body and brain must have exercise if they are developed, but too much exercise means that we have not given our bodies an opportunity to remove the waste materials.

The only perfect rest for both mind and body comes during sleep. When we are in a state of deep sleep, the cells of the body most effectively rid themselves of their waste products and build themselves up again for the work they must do during the day.

We often say we do not feel rested because we did not sleep well during the night. This means that the building up process did not work perfectly—all waste material is not eliminated.

Young people need more sleep than adults because they must develop new cells in order to grow and develop. If boys and girls are to become the most healthy, efficient men and women that it is possible for them to become, they must have not only the full amount of sleep their bodies need, but they must have it at regular periods.

When we realize that during rest, especially during sleep, the building up process goes on most rapidly, we can understand why the physician insists that the malnourished child shall have more rest than the normal boy or girl.

Problems for Discussion

If exercise causes you to feel tired, how can you explain the fact that it develops you?

How do you explain the fact that a football player loses eight pounds during a football game and gains them back over night?

Sometimes the football player fails to regain his lost pounds. The coach insists that he do light work for a few days. Can you tell why?

Why do you think the boy or girl who plays vigorously out of doors every day generally sleeps most soundly?

What is meant by the expression, "Fatigue is a form of self-poisoning?"

What advice would you give to your healthy schoolmates about the amount of exercise and the amount of rest to take?

If your brother were ten per cent under weight, what advice would you give him about the amount of exercise and rest he should have?

Why is the boy or girl who loses sleep so often irritable the following day?

Do you think headaches might be related to lack of sleep? Just how?

Do you think the natural tendency to lie down when we are ill is a wise provision of nature?

Do you think the boy or girl who goes to the movies from 7 to 11 p. m. has an even chance to be well and efficient with the boy or girl who goes to bed at a regular hour and gets the full number of hours of sleep needed?

What reasons would you offer to the boy who did not sleep regularly to convince him that he should?

SIXTH GRADE

Information Necessary for a Wise Selection of Food

Before boys and girls leave the sixth grade they should—

1. Be able to classify the most commonly used foods.
2. Understand the value of the building foods, the fuel foods, the regulating foods, and the vitamins.
3. Be able to recognize that a meal is well-balanced.

Introduce this simple classification of foods

1. The Building Foods

These help build up the body and renew used-up parts.

Milk is the most important.

Milk, eggs, meat, cheese, fish, peas, beans.

2. The Fuel Foods

These foods act as fuel to help our bodies do their work. Much as an engine needs fuel to make the car go, our bodies demand fuel if we are to be able to work and play.

Oatmeal, rice, cornmeal, wheat, bread, rye, sugar, honey, candy, dates, butter, potatoes, macaroni.

3. Regulating Foods

(The fact that these furnish building materials also must not be overlooked.) The chief function of these foods is to keep the parts of the body running smoothly. They are necessary for the proper elimination of waste materials from the body. They contain vitamins and minerals which are necessary for growth.

Oranges, apples, grapes, peaches, prunes, figs, spinach, lettuce, rhubarb, celery, carrots, beets, cabbage, artichokes, squash, asparagus, tomatoes, onions, turnips, cauliflower.

The Green Vegetables

Spinach	Turnip greens	Chard
Dandelion greens	Lettuce	Kale
Cauliflower	Artichokes	Cabbage
Beet greens	Mustard greens	String beans
Asparagus		

Important Facts About Food

Every child under five years should have a quart of milk per day. Older children should have at least a pint and a half per day.

The best breakfast for a growing child is a cooked cereal with milk, bread or toast and fruit.

If a child has a bowl of hot cereal he needs nothing hot to drink.

Lunch should consist of one or more vegetables with milk and bread.

The creamed vegetable soups make an excellent dish for lunch.

The other meal should consist of meat or meat substitute with at least one green vegetable and potatoes.

The use of green vegetables needs to be emphasized.

Every boy and girl needs some vegetables and fruit every day. We should remember that vegetables and fruit furnish building materials which are necessary to the body. They make other building materials more valuable.

Children generally eat too much sweets.

Encourage the drinking of milk with every meal. Less meat and more milk is a good slogan.

Coffee and tea have no food value.

Milk contains all the materials that help boys and girls to grow.

Coffee and tea contain caffeine (a stimulant—not a food).

Children should always eat a nourishing breakfast as they do not have the reserve power that adults have to go without nourishment.

No breakfast, or a breakfast lacking in nutritious elements, is one of the contributing causes of malnutrition.

Suggestions for the Diet of a Person Overweight

All kinds of green vegetables.

Fresh fruits.

Small portions of lean meat.

Very little starchy food.

Avoid all foods high in fuel value.

Milk.

Because of the sedentary character of our lives, many people are troubled with constipation. Children should be taught that the common causes of constipation are:

1. Lack of vigorous exercise.
2. Lack of regular bowel movement.
3. Lack of diet with large quantities of bulk.
4. Lack of sufficient quantity of water in the diet.

We know that if we do not eliminate waste products, they decompose and form poisons which are absorbed by the blood. Some of the commonest results are:

1. Dizziness.
2. Headache.
3. Indigestion.
4. Pimples.
5. Bad circulation.
6. Lowered body resistance.

Attention to exercise and eating the coarser vegetables, fruits and bread made of the whole grains, will usually regulate constipation.

According to Dr. Holt boys between 14 and 18 and girls between 12 and 16 need more food in proportion to their weight than at any other time in their life after infancy.

Necessity of Vitamin Content

The following from Dr. L. Emmett Holt gives his general conclusions concerning vitamins:

"Children should eat a variety of food. Special dangers may follow the habitual use of restricted diet. Milk is the one indispensable food for children. At least a pint and a half of milk a day is needed to supply vitamin A. Milk contains all the vitamins. A diet which includes no milk whatever should contain ample amounts of the green or leafy vegetables.

"If the daily diet contains milk, cereals, potatoes, green vegetables and some fruit, one need not fear a vitamin deficiency."

References:

Department of the Interior Bulletins.

Health Education Bulletin No. 10.

Health Education Bulletin No. 2: Diet for the School Child.

Health Education Bulletin No. 11: Milk and Our School Children.

Food Primer for the Home—Lucy H. Gillett.

Bureau of Food Supply, A. I. C. P., 105 E. 22nd St., New York.

Calories Required Per Day

Child 2-6 years requires 1000 to 1600 calories per day.

Child 6-12 years requires 1600 to 2500 calories per day.

Child 12-18 years requires 2500 to 3000 calories per day.

Man Requires Per Day

At rest—1800 to 2000 calories per day.

Sedentary Occupations—2200 to 2800 calories per day.

Working—3500 to 4000 calories per day.

Woman Requires Per Day

At rest—1600 to 1800 calories per day.

Sedentary occupations—2000 to 2200 calories per day.

Vigorous occupations—2500 to 3000 calories per day.

To Calculate the Number of Calories Needed

Find your normal weight according to age and height. Multiply the normal weight by the number of calories needed per pound.

Infants require 40-50 calories per pound per day.

Growing children, 30-40 calories per pound per day.

Adults (according to type of activity), 15-20 calories per pound per day.

Old age, 15 or less calories per pound per day.

Because feeding the family is often a great burden to people of moderate incomes, some knowledge of the relative economy of foods is important. The cost per pound does not always determine the relative economy of a food. Comparisons such as the following should be worked out by the children.

	Score for food value per lb.	Cost per lb.	Return in food value for each cent
Onions	270	3c	90
Cabbage	380	3c	127

One gets more food value for the money spent in buying cabbage than onions when each costs three cents per pound. (See pages 16 and 17, Food Primer for the Home, Gillett.)

The following data taken from "Rose—Feeding the Family," page 333, gives the relative value of some of our more common foods in 100 calorie portions. For further information refer to the above text.

Cooked or flaked breakfast foods— $\frac{3}{4}$ cups; $1\frac{1}{4}$ cups.

Milk— $\frac{5}{8}$ cup whole; $1\frac{1}{8}$ cup skim.

Cream— $\frac{1}{4}$ cup thin; $1\frac{1}{3}$ tablespoonsful very thick.

Butter, Olive Oil, or any other kind of fat—1 tablespoonful.

Bread—1 slice 3 in. by $3\frac{1}{2}$ in. by 1 inch.

Unsweetened biscuit—4 crackers.

Fresh Fruit—1 large orange or apple; 1 medium banana, or bunch of grapes; 2 medium peaches or pears; 4 or 5 prunes or dates; 2 dozen raisins; $1\frac{1}{2}$ large figs.

Eggs—1 exceptionally large; $1\frac{1}{3}$ medium.

Meat (beef, lamb, mutton, veal, chicken)—About 2 ozs. of cooked lean meat.

Bacon (cooked crisp)—About $\frac{1}{2}$ oz. (4 small thin slices).

Potatoes—1 medium.

Sugar—1 tablespoonful granulated; $3\frac{1}{2}$ full size lumps.

Cocoa (made with milk)— $\frac{2}{5}$ cup.

Macaroni and cheese— $\frac{1}{2}$ cup.

Cream of bean soup— $\frac{1}{2}$ cup.

Rice Pudding— $\frac{1}{2}$ cup.

Ice Cream (made with thin cream)— $\frac{1}{4}$ cup.

Milk Sherbet— $\frac{1}{4}$ cup.

Sponge Cake—1 large individual cake.

Nuts (shelled almonds, peanuts, pecans)—About $\frac{1}{2}$ oz.

Sweet Chocolate—About $\frac{3}{4}$ oz.

Spinach, Hubbard Squash— $1\frac{1}{2}$ cups.

Turnips—2 cups.

String beans— $2\frac{1}{4}$ cups of 1-inch pieces.

Corn (fresh)— $\frac{1}{2}$ cup.

Cabbage (shredded)—5 cups.
Tomatoes (fresh)—2 to 3 medium.
Carrots—4 to 5 young carrots.
Lettuce—2 large heads.
Cauliflower—1 very small head.
Beets—4 average size.
Bake Beans— $\frac{1}{3}$ cup.

CARE OF FOODS

Sufficient experimentation should be made to give all children a practical knowledge of the proper care of foods in the store and in the home.

Care of Milk

1. Grow bacteria from milk kept at a (a) cool temperature (b) at a warm temperature (c) covered (d) uncovered.

2. Place samples of milk in a warm place and in an ice box. Compare keeping qualities.

3. Care of milk.

Keep in cool, dark place. Keep bottles covered. Wipe top of bottle carefully before opening. A milkman's hands may not be clean.

Pasteurization destroys nearly all disease bacteria.

Care of Meat

Must be kept covered from flies. Flies lay eggs on meat which may develop into fly larvae in the intestine of the person who eats it.

Must be kept cool to prevent the development of bacteria.

Unhealthy animals sometimes contain little animals which may enter the human body and produce disease.

Pork may contain trichina. Beef may contain tapeworms. The best protection against these animals is thorough cooking.

Ask a city meat inspector to visit your school and tell you how the meat inspection is handled in your city.

Molds and Yeast

Grow mold on bread. Plant the spores on other material and watch rapid growth. Discuss the necessity for the sunning and scalding of bread boxes, etc.

Study a yeast plant under the microscope. Experiment with yeast plants at a boiling temperature, at 75 degrees and at a very cool temperature.

Care of Raw Foods

When fruit or vegetables are to be served raw, very careful washing is necessary. Harmful bacteria may enter the intestines unless this precaution is observed.

Milk As a Carrier of Bacteria

Typhoid fever, scarlet fever, diphtheria, tuberculosis are known to be carried by milk.

Discuss the importance to civilization of the discovery of pasteurization.

Simple menus to be used for reference in discussing wholesome balanced meals.

Breakfast

FRUIT:

Oranges	Stewed apricots
Apple sauce	Stewed peaches
Baked apple	Stewed prunes
Grapefruit	

COOKED CEREAL*:

Oatmeal	Hominy
Cornmeal	Cream of Wheat
Rice	Whole wheat
Butter and Toast (includes whole wheat and graham)	
Rolls	

EGGS:

Poached	Crisp bacon
Boiled	Scrambled
Omelet	

MILK or Cocoa

Lunches

1. Vegetable chowder	4. Cream of tomato soup
Scalloped corn	Macaroni and cheese
Baked apples	Sliced peaches
Bread and butter	Bread and butter
Milk	Milk or cocoa
2. Cream of potato soup	5. Creamed pea soup
Macaroni and dried beef	Lettuce salad
Graham bread and butter	Pears and oatmeal cookies
Apple sauce	Bread and butter
Milk	Milk
3. Cottage cheese salad	6. Boiled rice
Deviled eggs	Cottage cheese salad
Stewed dried apricots	Bread and butter
Corn bread and butter	Sliced oranges
Corn	Milk

Box Lunch

1. One cream cheese sandwich	4. Egg sandwich
One jelly sandwich	Jam sandwich
One piece sponge cake	Apple
One apple	4 walnuts
Milk	Milk
2. One cheese sandwich	5. One meat sandwich
One lettuce sandwich with	One jelly sandwich
mayonnaise	Nuts and raisins
One orange	6. Lettuce sandwich
Cookies	Stuffed egg
Milk or cocoa	Orange
3. Cream soup in thermos bottle	Milk
2 date and nut sandwiches	7. Tomato and lettuce sandwich
Ripe olives	One jam sandwich
	Grapes
	Milk

* Cooked whole grain cereals are best. Shredded wheat, puffed wheat, puffed rice and milk may be substituted for variety.

Dinners

1. Roast beef	4. Broiled steak
Browned potatoes	Baked potato
Cauliflower	Tomato salad
Cottage date pudding	Cup custard
Bread and butter	Bread and butter
Milk	Milk
2. Broiled fish	5. Roast lamb
Mashed potatoes	Baked sweet potatoes
Stewed tomatoes	Creamed onions
Lettuce salad	Spinach
Tapioca custard	Apple pudding with foamy
Bread and butter	sauce
Milk	Bread and butter
3. Creamed tomato soup	Milk
Tongue	6. Stewed chicken
New potatoes with parsley	Rice
Vegetable salad	Creamed peas
Floating island	Apple and celery salad
Bread and butter	Ice cream and lady fingers
Milk	

Methods in Developing Food Values

Always we should have this aim in mind—that we are trying to help boys and girls to know what is necessary about food so that they will choose food wisely and have such a keen conception of the dependence of the body upon proper nourishment to do its work well, that they will be possessed by the will to use their knowledge when selecting food. We do not wish to make scientists of our boys and girls, but we want them to appreciate the importance of food in determining their efficiency.

In the sixth grade a comparative study of home menus and standard menus as given by "Rose-Feeding the Family" will be valuable. Enough information is given here concerning foods to furnish a basis for discussion. A careful study of meals eaten at home in meeting the requirements of the classification of food values and the caloric value is advisable.

Before students have completed this grade they should be able to judge meals in a practical way. If our work is a success, boys and girls will not be satisfied to take coffee and doughnuts for lunch and ice cream sodas and candy at any period of the day.

We have thought it necessary in the past to teach our girls something about food values. Because of the present tendency to live in cafeterias and lunchrooms it is becoming more important for boys to know how to judge foods than in former years.

No attempt should be made to go into a careful study of food values, but children should know what constitutes a wholesome breakfast, lunch and dinner and every attempt should be made to establish habits of eating regularly, of eating a variety of food, of chewing the food thoroughly and of rest after eating.

We have been great consumers of meat. Children should learn to eat less meat and more vegetables, especially the green leafy vegetables,

as well as fruit every day. If we establish the habit of drinking milk with every meal, along with vegetables and fruit, we shall have gone a long way toward improving the eating habits of our children.

Food Values

In discussing food values the class might be divided into groups to work out plans for a model

- (1) Breakfast
- (2) Home lunch
- (3) School lunch
- (4) Dinner.

As these are presented by the different groups, the entire class should evaluate carefully that all may know exactly why the meal is well planned.

The ideas will be more vividly presented if each group illustrates his model meal with bright colored pictures, posted on a chart, or with clay models, or even with real foods if conditions permit.

The presentation of the results of the group's project offers an excellent opportunity for oral expression. The group should choose the person to present the conclusions of their study who will must forcefully make known their results.

When a report has been unusually well given, it should be presented to other grades or to a general assembly.

A comparison of a model meal with the dinner given below would help impress relative values:

Roast beef, boiled potatoes, macaroni, cornstarch pudding.

A study of foods that have a high iron content can be effectively presented by a chart giving colored picture of food and its percentage of iron.

The same can be done with foods containing vitamins.

Teachers have found that by making a vegetable chart many children have learned to eat vegetables they had always scorned. Brightly colored pictures of attractive vegetables are placed in a row at the top. Discussion of the value of the different vegetables often helps children to realize that the carrots they had refused to try to like are really very pleasant to the taste. Children place a check daily under the vegetable eaten. Finding which vegetable has been most popular at the end of the week offers excellent practice in adding.

The store project that is so often used in developing number work offers excellent opportunities for practice in the selection of foods. Children will be more interested in buying material for a well balanced breakfast or lunch than in just buying.

Children take turns at shopping for a certain meal. After the shopping is over, the materials purchased are shown to the group and a general discussion of what has been purchased and the reasons should follow.

In a fifth grade room where a model store was conducted were posted such signs as "We do not sell coffee." "We keep our milk cold." "No flies on our food." "Green vegetables always for sale."

The introduction of the bread and milk lunch at 10:30 in the morning offers the opportunity for practice of the habit of washing the hands before eating. All children should be sent to the lavatory before having their lunch.

Alcohol

So many bad effects have resulted from the use of alcohol that writers have been inclined to make statements concerning the evil results that have not been proven true.

Some of the effects which are very generally accepted as true follow:

(1) When alcohol is used in excess it is *very* injurious. We do not know just what "excessive use" is. What is excessive for one person may not be for another. Therefore it is foolish to risk our health, our efficiency, by even a very moderate use of alcoholic beverages.

(2) The use of alcohol creates an appetite for more. The habit of drinking a little leads to the habit of drinking a little more.

(3) Scientists are quite unanimously agreed that there is a large number of diseases of the heart and blood vessels, the kidneys, the liver, the nervous system, that are either caused by the use of alcohol or are greatly accelerated by its use.

(4) Careful tests in the laboratory have disproved the old belief that people work more efficiently and longer when they take a little beer or wine with their meals. What was thought to be an increase in the power of sustained effort was really the result of the narcotic effect of alcohol. The fatigue and accompanying discomfort were rendered unnoticeable by the deadening effects of the alcohol. All the claims that alcohol sustains strength and increases the power of the organism to resist disease are without any real foundation.

(5) The moral and social degeneration that results from the excessive use of alcohol needs no emphasis. Human beings are rendered not only physically repulsive, but they lose all sense of honor and decency when they indulge freely in its use.

(6) Instead of increasing the capacity for digestion, alcohol tends to cause people to overeat and thus bring on indigestion.

(7) In the industrial world, more and more, men are demanding that employees be total abstainers. The records of accidents and loss of life due to the use of alcohol furnish one of the most powerful arguments against it.

The question for our boys and girls to ask themselves is: "Why should I drink anything that experience has proved has no power to help me to become an efficient man or woman, but does have power to prevent me from being a success along any line of endeavor?"

Tobacco

Smoking is an acquired habit. We have no natural tendency to smoke.

Tobacco contains a poison called nicotine and it is because of the effects of this poison on the nervous system that people acquire "the habit" of smoking.

It has long been claimed that smoking especially attacks the nerves supplying the heart, and for this reason it is most important that growing children should avoid it.

It is also claimed that smoking acts as an irritant to the lining of the bronchial tubes and the lungs.

No one has ever been able to suggest a reason why a growing child should smoke. Besides the physiological objections to smoking there

are economic and social reasons for never allowing ourselves to become victims of the habit. Smoking is both time-consuming and expensive.

Hence from any viewpoint there seems to be no argument in favor of smoking. Employers are not looking for boys to fill responsible positions who have acquired the time-consuming habit of cigarette smoking. Some industries are entirely closed to smokers. Competition is sharp and the boy who wins in the struggle will be the boy who has the fewest bad habits to handicap him.

Coffee and Tea

Much has been written on the question of the good and bad effects of coffee and tea, and those who have experimented on the results are not all of the same opinion. The following discussion relates to the problem from the standpoint of the *child*.

Coffee and tea consist almost entirely of water. They serve no useful purpose except to introduce water into the body. They have practically no food value. They give the feeling of fullness and in this way prevent the child from eating food that would nourish.

They contain caffeine, which stimulates the nervous system and the heart.

The kind of stimulation the normal boy or girl needs is sleep, fresh air, nourishing food and exercise. Given these in proper amounts, they need no artificial stimulants.

It is often suggested that a cup of coffee which contains much milk and little coffee is not harmful. Undoubtedly it would be less harmful than a cup of strong coffee. The chief argument against it is that we tend to crave stimulants after using them; therefore, we easily form the habit of using stimulants.

Tea also contains caffeine, which is of practically the same nature as the caffeine of coffee.

Experiments on adults seem to indicate that coffee affects adults differently. Some are very sensitive to it, while others are only very slightly affected by it.

Growing boys and girls do not need stimulating beverages. The notion that a boy or girl must have a hot drink for breakfast is fallacious. They need warm food, but a bowl of hot cereal and milk furnishes both the heat and the nourishment needed.

SEVENTH GRADE Bacteria

In order that the study of bacteria shall affect in full the conduct of boys and girls, it is necessary that they be given the opportunity for experimentation. This alone insures that bacteria will be more than something read about.

It is important that children realize in studying bacteria that many are very useful and necessary for life. Only a few cause disease.

The study of bacteria should make vital to students the great importance of cleanliness. The mouth is naturally the gate through which bacteria most commonly enter. Some bacteria grow easily upon the lining of the air passages and are the cause of colds, bronchitis, pneumonia and consumption. Hence, clean hands are of the greatest importance.

The hands are great collectors and should be kept away from the mouth. Before touching food we should always wash our hands.

If we keep our bodies in good condition through proper food, rest and exercise, we are usually able to resist the attacks of bacteria.

Interesting and Valuable Experiments .

1. Make agar cultures of bacteria from common sources of infection, such as hands, common drinking cups, handkerchiefs.
2. Inoculate an agar plate with a fork that has been used in eating, washed and rinsed in lukewarm water and wiped on a dish towel. Do the same with a fork that has been washed in boiling soapy water, rinsed in boiling water and dried on a rack.

After experimentation has made clear the nature of bacteria, especially the rapidity of growth, boys and girls will be interested in reading and discussing the results of scientific efforts to handle germs.

How Bacteria Enter the Body

Mouth, nose, food, water, broken skin, lining of air passages.

Natural Defenses Against Bacteria

(1) External defenses :

Hair of nose
Cilia of windpipe
Saliva
Mucous membrane unfavorable to growth.

(2) Internal defenses :

White corpuscles
Antitoxin.

Communicable Diseases

In discussing communicable diseases with boys and girls of the pre-adolescent years, the emphasis should be placed always upon the constructive, hopeful side. Our study should help us to realize that science has made such tremendous strides toward handling the germs that have caused mankind so much suffering, that we have every reason to believe that in time we shall be able to control all of them.

Projects that will help us to appreciate how science has helped us, and will therefore stimulate us to make greater scientific efforts to control communicable diseases:

(1) Find out the decrease in the death rate from tuberculosis in San Francisco during the last ten years.

What were the chief reasons?

(2) What facts can you give concerning the decrease in death rate in the United States Army, due to vaccination between 1909 and 1913?

See Winslow, Healthy Living, Book 2.

Look up the results of the introduction into New York City of diphtheria antitoxin in 1894.

See Winslow, Healthy Living, page 294, Book 2.

What part did the discovery that yellow fever is transmitted through the bite of a mosquito play in the building of the Panama Canal?

Why did we formerly believe that malaria developed in swamps?

Is it fair to cough in the face of another person?

Do you think it very important that our city controls the quality of the milk supply? Exactly why?

If a member of your family had diphtheria what rules would you observe regarding both the sick person and the other members of the family?

Do you think mothers have a right to object to friends' kissing their babies?

How does the death rate of infants in San Francisco compare with the rest of the country? How would you explain the low rate in San Francisco?

Journal of Public Health, Vol. IX, No. 4, April, 1919, pp. 241-254.
To what is the decrease in typhoid fever in California due?
Write to the Board of Health for information.

Spread of Disease by Animals

Study of life cycle of the fly by experimentation.

The favorite breeding places for flies are garbage and manure piles. Flies gather up germs from filthy places on their legs and bodies and distribute them over our food. Destroying flies is one way of destroying disease.

Methods of Combating Flies

Prevent breeding—destroy breeding places.

Trapping flies.

Keeping flies away from human discharges.

Keeping flies away from food.

Mosquitoes and Fevers

The stegmoyia mosquito sucks the blood of the patient suffering from yellow fever. In a little less than two weeks it is able to inject the yellow fever germ into a healthy person.

The anopheles mosquito spreads malaria in the same way. Malaria and yellow fever can be spread only by the bite of a mosquito. The mosquito gets the germs only by biting an infected person.

Knowing these facts, what is necessary to abolish yellow fever and malaria?

Ways of Destroying Mosquitoes

Put oil on water where larvae hatch.

Put fish that eat the larvae into the water.

Screen outhouses.

Destroy breeding places by draining swamps and all stagnant water.

Important Topics for Discussion

Discuss the relation to the health of mankind of:

1. Rabid dogs.
2. Ground squirrels.
3. Rats.
4. Mice.
5. Fleas.

Immunity to Disease

Individuals vary greatly in their natural capacity to fight and destroy invading microbes. This difference in the natural tendency

of different individuals to conquer disease germs led people to believe that tuberculosis was inherited. Germ diseases are not inherited but some individuals inherit little capacity to resist disease.

When a person is attacked by a particular disease, the white blood-cells and certain substances formed in the tissues begin to fight the disease germs. If the person recovers it is because the attacking substance and white cells prevail over the disease germs. In some cases the body maintains this power of killing this special kind of germ for a long period of time. After certain diseases it retains this power for life. This power to resist a certain disease is called immunity to that disease.

Modern science has discovered a method of helping our bodies establish immunity before the disease germs have attacked us and to help our bodies to conquer the invading germs even after they have entered our bodies.

Vaccines and Serums

Investigate the results of these discoveries on smallpox, diphtheria and typhoid. Emphasize the tremendous significance of these discoveries to the happiness of mankind. In this connection the work of Jenner and Pasteur is especially interesting.

In studying the question of immunity the point should be made clear that even though we are in fine physical condition we may not be immune to certain communicable diseases. A clear understanding of this fact should help all to realize the tremendous importance of observing all laws relating to communicable diseases. However, the person who is physically fit, is *relatively better able to withstand the attack of any kind of sickness than he would be were he not in good physical condition.*

Ask the children to suggest ways of combating the spread of disease. Compare their lists with the following:

1. Education in health.
2. Keeping hands clean.
3. Plenty of sunlight.
4. Not spitting.
5. Using individual drinking cups.
6. Using individual towels.
7. Covering mouth when coughing.
8. Covering nose when sneezing.
9. Never touching food of others.
10. Keeping hands away from mouth.
11. Destroying flies.
12. Obeying quarantine regulations.

Help children to realize that the source of infection is nearly always an infected individual.

Patent Medicines

We should never take medicines except on the advice of a reputable physician. Many patent medicines contain both alcohol and many harmful habit-forming drugs. Opiates are very often found in them. Medicines given to soothe babies usually contain morphine or opium, and the much-advertised headache cures often contain poisons such as acetanilide.

Ask your druggist how extensively patent medicines are used.

Collect advertisements from newspapers.

Patent medicines should be avoided because:

1. They often relieve pain without affecting the cause of the pain.
2. They may establish habits which lead to the use of drugs.

EIGHTH GRADE Community Health

By the end of the seventh grade the more important health habits should be established and the child should have developed into an individual that not only lives according to the best known laws of health, but does so intelligently.

In the eighth grade he should be helped to see that there are many health problems that are beyond the control of the individual. This is particularly true of people who live crowded together in our towns and cities.

This does not signify that the seventh and eighth grades are the time for social education to begin. All education to be of value must be fundamentally social. In this pre-adolescent period, youth normally becomes more definitely interested in the larger social problems, hence the information which will help him to be more intelligently interested should be introduced.

The conception of the need for intelligent control by the community of many health problems can probably be most effectively developed by having the students make a study of the work done by the Board of Health in this city. Whenever possible, children should observe the real work being done in their city.

The following classification is suggestive as a basis for the work:

1. Problems of Municipal Sanitation:
 - (a) Sewage disposal
 - (b) Refuse disposal
 - (c) Street cleaning
 - (d) Public water supply.
2. Supervision of Food Supplies:
 - (a) Inspection of dairies
 - (b) Inspection of milk (milkers) (pasteurization)
 - (c) Inspection of places where food is sold
 - (d) Inspection of food and drug frauds.
3. Inspection of general sanitary conditions:
 - (a) Toilets
 - (b) Cesspools
 - (c) Mosquito-breeding pools
 - (d) Fly-breeding filth
 - (e) Buildings (light) (ventilation)
 - (f) Harmful dusts and poisons.
4. A Health Laboratory:
 - (a) Examination of bacteria
 - (b) Preparation of sera and vaccines
 - (c) Examination of samples of water, milk, foods, drugs.
5. Educational activities:
 - (a) Infant Welfare Station
 - (b) Clinics

- (e) Public health nurses
- (d) Distribution of information to public
- (e) Exhibits
- (f) Lectures.

6. Vital Statistics :
 - (a) General death rate per thousand
 - (b) Death rate from specific causes.
7. Control of Communicable Diseases :
 - (a) Inspection for isolation
 - (b) Inspection for sanitation
 - (c) Administering of antitoxin
 - (d) Vaccination
 - (e) Destroying insect carriers
 - (f) Controlling epidemics.

Methods of Work

The value of and the necessity for the Board of Health to the community can probably be best developed by a general discussion in the class of the functions of the Board of Health. The members of the class might then take up the special activities by committees. These committees should get all of the more important information concerning the activities of their special division and organize it so that it can be presented to the group in graphic form. Posters or graphs showing any conclusions or specially important data are effective means of presentation.

Out of this study should come to every boy and girl a clear-cut notion of the duties of the Board of Health, and quite as important, a clear-cut notion of the duty of every boy and girl to help the Board of Health to perform its duties successfully.

As a result of this study, every boy and girl should become keenly conscious that he has no right to be passive where community health problems are concerned.

Community health can be determined by the community.

The following are health problems which every boy and girl should be able to discuss intelligently by the end of the eighth grade:

1. Who reports cases of communicable diseases to the Board of Health?
2. If you heard of a case of smallpox that had not been reported what would you do?
3. What action does the Board of Health take?
4. If a person returned to business or school before the quarantine had been lifted, would you call him a good citizen? What would you do in such a case?
5. Would a community be justified in passing a law requiring medical inspection of all cooks in restaurants?
6. What standard would you use in judging the success of the work of the Board of Health?
7. What are the duties of the nurse that visits your school? In what ways can you help the school nurse?
8. Would you agree that a community, within natural limitations, can determine its own death rate? Give definite reasons.

9. What health regulations are necessary now that were not necessary in colonial days?
10. What has the State done through laws for pure food?
11. Has the United States Government passed any laws about pure food?
12. What connection do you see between the beef scandal during the Spanish-American War and national health regulations?
13. Should we feel any concern if the bubonic plague develops in Australia?
14. What has the Red Cross done to improve world health conditions?
15. Is it important that we have health laws relating to immigrants coming into our country?
16. Do you think a city is justified in passing an ordinance prohibiting spitting on the sidewalk?
17. Would you vote to require all dairies to pasteurize milk?
18. What are the laws and regulations in this city regulating the handling of milk? What suggestions would you make for improvement?
19. Compare the death rate in this city with the death rate in six other cities.
20. Which do you consider the most important factors controlling the death rate?
21. What are some of the most important enterprises for the improvement of public health that this city is engaged in handling now?
22. What suggestions would you offer for the improvement of the public health of your community?
23. Which do you consider the more valuable, the work of Abraham Lincoln or Pasteur?

BIBLIOGRAPHY **General References for Teachers**

1. American Red Cross. Red Cross Instruction in Home Hygiene and Care of the Sick for Girl Scouts. American Red Cross, Washington, D. C., 1922.
2. American Red Cross. Text Book on First Aid. American Red Cross, Washington, D. C.
3. Andress, J. Mace, Health Education in Rural Schools. Houghton Mifflin Co. Boston, 1919. \$1.85. 321 pp.
4. Andress, J. Mace, The Teaching of Hygiene in the Grades, Houghton Miffling Co., Boston, 1919, 177 pp.
5. Character Education Methods. Character Education Institution, Chevy Chase, Washington, D. C. 1922.
6. Dansdill, Theresa, Health Training in Schools. National Tuberculosis Assn. 370 Seventh Ave., New York, 1923. \$1.00. 405 pp.
7. Health Education—A Program for Public Schools and Teacher Training Institutions. Report of Joint Committee on Health Problems in Education. Thos. D. Wood, M. D., 525 W. 120th St., New York. 50c.

- Rogers, Anges L. A. Tentative Inventory of Habits, issued by the Dept. of Kindergarten—First Grade Education of Teachers' College. Bureau of Publications, Teachers' College, Columbia University, New York City, 1922. 30c. 19 pp.
- Posture of School Children, Jessie Bancroft. MacMillan & Co., N. Y.

Texts for Pupils

- Cobb, Walter F. Graded Outlines in Hygiene. World Book Co., Yonkers, N. Y. 1922. \$1.50. 210 pp.
- Haviland, Mary L. Haviland Health Series. J. B. Lippincott, Philadelphia, Pa. 1922.
- Hutchinson, Woods. The Woods-Hutchinson Health Series. Houghton Mifflin Co., New York. 1922.
- O'Shea, M. V. and Kellogg, J. H. The Everyday Health Series. The Macmillan Co., New York.
- O'Shea, M. V. and Kellogg, J. H. The Health Series of Physiology and Hygiene. The Macmillan Co., New York. 1915.
- Ritchie, G. W. and Caldwell, G. L. Hygiene Series. World Book Co., Yonkers, N. Y.
- Rose, Mary Swartz. Food Lessons for Nutrition Classes. Teachers' College, Bureau of Publications, Columbia University, New York City. 15c.
- Winslow, C. E. A. and Hallock, Grace T. The Winslow Health Series. Chas. E. Merrill Co., New York and Chicago.

Suggested Readings for Grades Below the Third

- Boothe, Stella and Carter, Olive I. Mary Gay Stories. World Book Co., Yonkers, N. Y. 60c.
- Mitchell, Lucy Sprague. Here and Now Story Book (for two to seven-year-olds). E. P. Dutton & Co., New York. 1921. 360 pp.
- Van Meter, A. R. First Reader, Nutrition Series No. 1. Merrill Palmer Motherhood and Home Training School, 301 Palmer Bldg., Detroit, Mich.

Suggested Reading for Grades Above the Fourth

- Andress, J. Mace and Andress, Annie Turner. A Journey to Health Land. Ginn & Co., Boston. 1924. (For third or fourth grade.)
- Andress J. Mace. The Boys and Girls of Wake-up Town. Ginn & Co., Boston, 1924. (For fourth or fifth grade.)
- Ferguson, H. W. A Child's Book of the Teeth. World Book Co., Yonkers, N. Y. 1919. 44c. 63 pp.
- Herben, Beatrice Sleyton. Jack o' Health and Peg o' Joy; a Fairy Tale. Charles Scribners' Sons, New York. 1921. 39 pp.
- Keep Well Stories for Little Folks. J. B. Lippincott Co.
- Rosy Cheeks and Strong Heart. The Macmillan Co., New York.

Health Plays

- Health Plays for School Children. American Child Health Assn., 370 Seventh Ave., New York.
- Milk Fairies, National Dairy Council, Chicago, Ill.
- The Jewels of Cornelia, by James A. Tobey, Order from National Tuberculosis Assn., 370 Seventh Ave., New York City.

4. The Brushes' Quarrel. Written by Miss Mabel Osborne and her class in school. (Cleveland, Ohio.) Order from National Tuberculosis Assn., 370 Seventh Ave., New York City.
5. A Fantasy of Foods, by Milton E. Bond. Order from National Tuberculosis Assn., 370 Seventh Ave., New York City.
6. David and the Good Health Elves. Written by Miss Maynard Downe for the Wisconsin Anti-Tuberculosis Assn., Order from National Tuberculosis Assn., 370 Seventh Ave., New York.
7. The Quest for the Fountain of Youth by Mrs. Mildred Dallinger Burnham for the U. S. Dairy and Food Council. Order from National Tuberculosis Assn., 370 Seventh Ave., New York.
8. Playing Visit by Constance P. Wardle. Order from National Tuberculosis Assn., 370 Seventh Ave., New York.
9. The Theft of Thistletown, by Prof. George M. P. Baird. Order from National Tuberculosis Assn., 370 Seventh Ave., New York City.
10. The Adventure of Everychild, by Mrs. Henry Backus. Order from National Tuberculosis Assn., 370 Seventh Ave., New York City.
11. From Frowns to Smiles, by Sara Henderson. March Bros., Lebanon, Ohio.

Organizations from Which Health Education Material May Be Obtained

1. American Child Health Assn., 370 Seventh Ave., New York City. Supplies the most complete variety of materials for health education; plays, readings, weight charts; and records, games, pamphlets for the teachers, etc. Send for list of publications.
2. Bureau of Education, Department of the Interior, Washington, D. C.

Health Education Series

- No. 1. Classroom Weight Record. Single copy, 5c; additional copies, 1c each.
- No. 2. Diet for the School Child. Single copy, 5c; additional copies, 2c each.
- No. 10. Suggestions for a Program for Health Teaching in the Elementary Schools. Single copy, 10c; additional copies, 6c each.
- No. 11. Milk and Our School Children. Single copy, 5c; additional copies, 2c each.
- No. 13. Dramatics for Health Teaching. Single copies, 5c; additional copies, 2c each.
- No. 14. Health and the Kindergarten. Single copy, 5c; additional copies, 3c each.

School Health Studies

Who's Who in Healthland. A report on methods used to stimulate the acquisition of health habits in the public schools of Newton, Mass. Single copy, 10c; additional copies, 5c each.

Other Organizations From Which Information, Charts, Pamphlets, Slides, Etc., May Be Obtained

1. American Medical Assn., 535 N. Dearborn St., Chicago, Ill.
2. American Posture League, 1 Madison Ave., New York City, Lantern slide reprints, traveling exhibits.
3. American Social Hygiene Assn., 370 Seventh Ave., New York City.
4. Bureau of Food Supply, A. I. C. P., 105 E. 22nd St., New York City.
5. Boy Scouts of America, 200 Fifth Ave., New York City.
6. Camp Fire Girls, 527 Fifth Ave., New York City.
7. Girl Scouts, 527 Fifth Ave., New York City.
8. Life Extension Institute, 25 W. 45th St., New York City.
9. Metropolitan Life Insurance Co., New York City. Posters, charts and booklets on health. Free.
10. Natural History Museum, New York City. Exhibits and slides.
11. National Child Welfare Assn., 70 Fifth Ave., New York City. Send for booklet listing their charts, posters and other publications.
12. National Committee for Mental Hygiene, 370 Seventh Ave., New York City.
13. National Dairy Council, 910 S. Michigan Ave., Chicago, Ill. Send for pamphlets. "Educational Material," which lists all the materials available from this organization; posters, films, slides, booklets, leaflets, folder, health plays, etc.
14. National Safety Council, 168 N. Michigan Ave., Chicago.
15. Playground and Recreation Assn. of America, 1 Madison Ave., New York City.
16. The Rockefeller Foundation, 61 Broadway, New York City.
17. The Russell Sage Foundation, New York City.
18. State Boards of Health.
19. State Tuberculosis Associations.
20. Superintendent of Documents, Washington, D. C. Price list of government publications on health.

Sources from Which Motion Pictures for Health Education May Be Obtained

1. American Motion Picture Service. (Distributed by Community Picture Co.), 50 Church St., New York City.
2. Rockefeller Foundation, 61 Broadway, New York.
3. State Boards of Health, State Agricultural Colleges and State Universities often distribute films.

Magazines

1. American Child, National Child Labor Committee, 105 E. 22nd St., New York City.
2. American Journal of Public Health, 370 Seventh Ave., New York City.

3. Child Health. The American Child Health Assn., 370 Seventh Ave., New York City. Issued monthly. \$3.00 per year; 25c single copy.
4. Public Health Reports, Washington, D. C.
5. The Crusader. Wisconsin Anti-Tuberculosis Assn., Health Service Bldg., Milwaukee, Wis. Monthly except July and August, 50c a year; single copy, 5c. As a supplement, publishes large sheet with calendar on one side and Health Reading Lesson (for primary grades) on other side.
6. Hygenia. The American Medical Assn., 535 N. Dearborn St., Chicago. Issued monthly, \$3.00 per year; 25c single copy.
7. Library Index. National Health Library, 370 Seventh Ave., New York City. Issued weekly. Gives classified references to articles about health in many current magazines.
8. The Nation's Health, 20-24 E. Ontario St., Chicago. Issued monthly. \$3.00 per year.

